

**NEVADA DEPARTMENT OF
CONSERVATION & NATURAL RESOURCES**

STATE ENVIRONMENTAL COMMISSION

HEARING ARCHIVES FOR

REGULATORY PETITIONS

COMMISSION PETITION NO. 93008

LEGISLATIVE COUNSEL BUREAU (LCB) FILE NO. R-051-93

DOCUMENTS INCLUDED IN THIS FILE:

YES SECRETARY OF STATE FILING FORM

YES DISCLOSURE STATEMENT PURSUANT TO NRS 233B

REGULATORY PETITIONS

ORIGINAL DRAFTED BY COMMISSION

ADOPTED BY COMMISSION

YES AS FILED AND CODIFIED BY LCB

Secretary of State
Filing Data

For Filing Administrative
Regulations

For Emergency
Regulations Only

Effective Date _____

Expiration Date _____

Governor's Signature

**Environmental
Commission**

Classification [] Proposed [] Adopted By Agency [XX] Temporary [] Emergency []

Brief description of action: Petition 93008 (LCB R-051-93) permanently amends NAC 444 by adoption of the federal landfill criteria and language, establishing a landfill permitting program for solid waste and other technical amendments. This petition implements the changes in the solid waste statutes as approved by Senate Bill 97 of the 1993 legislative session.

Authority citation other than 233B: NRS 444.560 and as amended by Senate Bill 97, Section 19 as approved and made effective by the Governor on March 10, 1993.

Notice date:

Temporary - April 20, May 6, May 17 and May 19, 1993

Permanent - August 24, September 8 and September 16, 1993

Hearing date:

Temporary - May 27, 1993 and June 8, 1993

Permanent - September 22, 1993

Date of Adoption of Agency:

Temporary - Sections 1 thru 37, exclusive of Section 24, 25 and 15.5 were adopted on May 27, 1993. Sections 8 and 17 were revised and in conjunction with Sections 14.5, 24, 25 and 38 through 99 which were adopted on June 8, 1993.

Permanent - September 22, 1993

**LEGISLATIVE REVIEW OF ADOPTED REGULATION AS REQUIRED
BY ADMINISTRATIVE PROCEDURES ACT, NRS 233B.066
PETITIONS 93008 & 94001
LCB R-051-93 & Redo #1**

The following statement is submitted for adopted permanent amendments to Nevada Administrative Code 444:

1. A description of how public comment was solicited, a summary of public response, and an explanation how other interested persons may obtain a copy of the summary

Petition 93008 was noticed seven (7) times: 4-20-92, 5-6-92, 5-17-93, 5-19-93, 8-24-93, 9-8-93, 9-16-93 in the Las Vegas Review Journal and Reno Gazette-Journal.

Public comments were made by the regulated industry. Those comments focused on the proper roles of government in oversight of business affairs of the solid waste industry. The Nevada Department of Insurance provided input on the adequacy of various financial assurance measures. The regulations were modified to restrict surplus line carriers to those registered in the state of Nevada.

Petition 94001 was noticed three (3) times: 8-24-93, 9-8-93 and 9-16-93 in the Las Vegas Review and Reno Gazette-Journal newspapers.

2. A description of how comment was solicited from affected businesses, a summary of their response, and a explanation how other interested persons may obtain a copy of the summary.

Comments for petition 93008 were solicited from affected businesses by the notices in the newspapers as outlined in #1.

Comments for petition 94001 were solicited from affected businesses by the notices in the newspapers, as outlined in #1. No written comment was received prior to the hearing.

3. If the regulation was adopted without changing any part of the proposed regulation, a summary of the reasons for adopting the regulation without change.

For petition 93008 the temporary adoptions, Sections 1 through 37, exclusive of Section 24, 25, and 15.5 were adopted on May 27, 1993. Sections 8 and 17 were revised and in conjunction with Sections 14.5, 24, 25 and 38 through 99 which were adopted on June 8, 1993. The permanent regulations for petition 93008 were adopted at the SEC hearing on September 22, 1993. The regulations were changed to correct inadvertent language problems during the finished drafting of the document for permanent action.

For petition 94001 the permanent regulations were adopted at the SEC hearing on September 22, 1993 with no further public comment. The regulations were amended to correct and clarify problem discovered during the drafting process.

4. The estimated economic effect of the regulation on the business which it is to regulate and on the public. These must be stated separately, and each case must include:

- (a) Both adverse and beneficial effects; and**
- (b) Both immediate and long-term effects.**

- a. For petition 93008 the Federal requirements for the management of solid waste established in 1991 mandate substantial new design and operational requirements at solid waste management facilities. Facilities will be subject to additional cost to comply with the federal requirements. Propose State regulatory amendments will not increase costs to such facilities beyond the increases associated with federal requirements. In fact, savings may be realized due to the flexibility granted to States with programs approved by EPA.

For petition 94001 the proposed delay may, in the short-term, have an adverse effect on the private disposal industry that is seeking disposal contracts with municipal governments. Municipal governments may, in the short-term, benefit from the delay since increased disposal costs can be deferred until the new effective date. The delay affords municipal governments needed additional time, which may provide a long-term benefit by allowing for more thorough consideration of solid waste disposal options.

- b. In regards to petition 93008 the public may be subject to increased costs for solid waste disposal due to facility requirements to meet additional design and operational costs associated with compliance with the federal standards. No additional increased in cost to the public is anticipated due to these State regulatory amendments.

In regards to petition 94001 the public may benefit from the delay since increased costs for disposal may be marginally deferred into the future. This economic benefit is not likely to be great, since the delay is intended to provide municipal governments with time to assess fees and collect the revenue needed to support a solid waste disposal infrastructure.

- 5.** The estimated costs of petition 93008 to the agency for enforcement of the proposed regulation. NDEP has proposed one new staff position in its biennial budget to support permitting of disposal sites. This new position is in addition to three existing positions. Annual budgeted costs for implementation of the overall solid waste management program are estimated at \$300,000.

In regards to petition 94001 the proposed delay will not result in any new costs to the NDEP.

- 6. A description of any regulations of other state or government agencies which the proposed regulation overlaps or duplicates and a statement explaining why the duplication or overlapping is necessary.**

In regards to petition 93008 and 94001 there are no state or government agency regulations which overlap with this regulation.

Note: Petition 93008 was the primary solid waste landfill regulatory package, while petition 94001 was a corrective petition, focusing on changes in dates prescribed in the Federal Register on October 1, 1993 by the U.S. EPA.

**PERMANENT REGULATION OF THE
NEVADA STATE ENVIRONMENTAL COMMISSION**

LCB File No. R-051-93

EXPLANATION--Matter in italics is new; matter in brackets [] is material to be omitted. Language underlined relates to those sections amended when the Commission adopted the regulations on 9-22-93.

AUTHORITY: NRS 444.560

Section 1. Chapter 444 of NAC is hereby amended by adding thereto the provisions set forth as sections 2 to 87, inclusive, of this regulation.

Sec. 2. *"Active life" means the period of operation of a disposal site beginning with the initial receipt of solid waste and ending at the completion of closure activities in accordance with sections 69, 70 and 71 of this regulation.*

Sec. 3. *"Administrator" means the administrator of the division of environmental protection of the state department of conservation and natural resources.*

Sec. 4. *"Appendix I" means the appendix I of 40 C.F.R. Part 258.*

Sec. 5. *"Appendix II" means the appendix II of 40 C.F.R. Part 258.*

Sec. 6. *"Aquifer" means a geological formation, group of formations or portion of a formation capable of yielding usable quantities of ground water to wells and springs.*

Sec. 7. *"Cell" means a portion of a municipal solid waste landfill unit which consists of compacted wastes completely enclosed in cover material.*

Sec. 8. *"Cross-media" means the transfer of a constituent from a medium such as water, land or air, to another medium.*

Sec. 9. *"Existing municipal solid waste landfill unit" means a municipal solid waste landfill unit which is receiving waste on October 9, 1993.*

Sec. 10. *"Gas condensate" means the liquid generated as a result of any processes to recover gas at a municipal solid waste landfill unit.*

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- Sec. 11. "Ground water" means all subsurface water comprising the zone of saturation, including perched water.**
- Sec. 12. "Household waste" means any solid waste, including garbage, trash and sanitary wastes, derived from households, including single and multiple family residences, hotels, motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and recreation areas used during the daytime.**
- Sec. 13. "Leachate" means a liquid which has passed through or emerged from a municipal solid waste landfill unit and contains soluble, suspended or miscible materials removed from the waste within the unit.**
- Sec. 14. "Medical waste" has the meaning as ascribed to it in 49 C.F.R. Part 173, Appendix G - "Definition of Regulated Medical Waste," as that appendix existed on the effective date of this regulation.**
- Sec. 15. "New municipal solid waste landfill unit" means a municipal solid waste landfill unit which has not received waste before October 9, 1993.**
- Sec. 16. "Operator" means the person responsible for the overall operation of a disposal site or any part of that site.**
- Sec. 17. "Owner" means the person who owns a disposal site or any part of that site.**
- Sec. 18. "Postclosure" means the period immediately after a disposal site is closed which lasts in accordance with section 72 of this regulation.**
- Sec. 19. "Qualified ground water scientist" means a person who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in ground water hydrology and related fields as may be demonstrated by professional certifications or the completion of accredited programs offered by a college or university which enable him to make sound professional judgments regarding the monitoring of ground water, the fate and transportation of contaminants, and required corrective actions.**
- Sec. 20. "Surface impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation or diked area formed primarily of earthen material or lined with man-made material, which is designed to hold an accumulation of liquid wastes or wastes containing free liquids. The term includes holding storage, settling and aeration pits, ponds and lagoons. The term does not include an injection well.**
- Sec. 21. "Uppermost aquifer" means the aquifer located within the boundaries of a disposal site that is nearest the natural ground surface. The term includes lower aquifers which are hydraulically interconnected within the boundary of the disposal site.**
- Sec. 22. The provisions of NAC 444.570 to 444.748, inclusive, and sections 2 to 87, inclusive, of this regulation, do not waive or circumvent the provisions of NRS 445.131 to 445.354, inclusive, 445.401 to 445.610, inclusive, 459.400**

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to 459.600, inclusive, and 459.800 to 459.856, inclusive. Each owner and operator shall comply with all other laws and regulations adopted and orders issued pursuant to those sections governing the disposal of solid waste.

Sec. 23. 1. *Except as otherwise provided in subsection 2, the owner or operator of a disposal site must obtain a permit to operate the site from the appropriate solid waste management authority.*

2. *The following sites are exempt from the provisions of subsection 1:*

- (a) Composting bins which are operated at a personal residence for personal use; and*
- (b) Municipal composting operations for yard wastes.*

3. *The owner or operator of a proposed disposal site shall obtain a permit before the construction or operation of that site. An application for a permit shall be submitted at least 180 days prior to the anticipated start of construction, in order to allow sufficient time for review and issuance of the permit.*

4. *A disposal site for which a notice of intent to either close the site by October 9, 1993, or continue operations after October 9, 1993, has not been submitted to the solid waste management authority shall be deemed to be an open dump. All disposal sites which are to continue operations after October 9, 1993, must have a permit issued by the solid waste management authority by October 9, 1996.*

5. *Interim approval shall be deemed to be granted to an owner or operator who submits a notice of intent to continue operations after October 9, 1993, to the solid waste management authority. The owner or operator to whom interim approval is granted must operate and maintain the site in compliance with all applicable statutes and regulations to maintain that approval. The interim approval is effective until the site is closed or a permit is issued for the site.*

Sec. 24. 1. *A solid waste management authority shall, within 45 days after receiving an application for a permit to operate a disposal site, notify the applicant as to whether the application is complete or deficient in content. A determination of completeness must be based on whether the application contains all specified documents and supporting information required by NAC 444.677, 444.705 or 444.733, as applicable. The solid waste management authority may require the submittal of any such additional documents or information as it deems necessary.*

2. *If the solid waste management authority determines that an application is complete, the authority shall evaluate the merits of the application to determine if the application is in compliance with all applicable statutes and regulations.*

3. *Upon completion of the evaluation, the solid waste management authority shall prepare and issue:*

(a) A notice of intent to issue or deny the issuance of the permit. The notice must:

(1) Be sent to the applicant, and the governing body in which the disposal site is located, and published in a newspaper of general circulation for the area in which the [unit] site is located;

(2) Summarize the action to be taken by the solid waste management authority;

(3) State that the authority will accept comments from the general public for 30 days after the date that the notice is issued; and

(4) Describe the procedure for obtaining copies of the documents and comments submitted with the application.

(b) A factual sheet which describes the proposed facility, the proposed action, the availability of the documents submitted with the application and the procedure for public review and comment.

Sec. 25. 1. *An applicant for a permit to operate a disposal site and any other interested person may, within 30 days after the notice of intent is issued pursuant to section 24 of this regulation:*

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(a) Submit a written request to the solid waste management authority for a public hearing on the proposed issuance or denial of the permit which must state the nature of the issues which the requester intends to raise at the hearing; or

(b) Submit written comments on the proposed issuance or denial of the permit to the solid waste management authority.

2. The solid waste management authority:

(a) May schedule a public hearing if requested pursuant to this section or on its own initiative; and

(b) Shall publish a notice of a hearing scheduled pursuant to this section at least 30 days before the date of that hearing.

3. The solid waste management authority may extend the period for public review as it deems necessary.

Sec. 26. The solid waste management authority shall issue a statement responding to the written comments on the proposed issuance or denial of a permit to operate a disposal site which are received during the period for public review. A copy of the statement must be sent to the applicant, the person who submitted the written comments, if different from the applicant, and all other persons who specifically request, in writing, a copy of the statement. A copy of the statement must be made available for inspection by the general public at a location specified by the solid waste management authority.

Sec. 27. Within 15 days after the end of the period for public review, the solid waste management authority shall:

1. Issue a permit to operate a disposal a site; or

2. Deny the application and send written notice to the applicant which details the reasons why the application is being denied. The written notice must set forth the time and procedure by which the applicant may appeal the decision of the solid waste management authority.

Sec. 28. A permit to operate a disposal site issued by a solid waste management authority:

1. Must be issued for the life of the design of the disposal site;

2. May be modified by the solid waste management authority if the statutes or regulations upon which the issuance of the permit is based change, or if a modification is otherwise necessary to protect public health and safety and the environment;

3. Must specify the amount and type of solid waste which the disposal site may receive that is consistent with the design and operational plans of the site;

4. Must be issued for the area and volume of waste specified in the application, if the disposal site is a municipal solid waste landfill unit or Class III site;

5. May be revoked or suspended if written notice is given by the solid waste management authority and the disposal site does not remain in compliance with the applicable statutes and regulations; and

6. Must be issued to a specific operator or owner. A permit may be transferred to a subsequent owner or operator only if the solid waste management authority approves the transfer based on documentation of financial responsibility provided by the new owner or operator.

Sec. 29. A permit to operate a disposal site may be modified upon the request of the owner or operator of the disposal site and approval of the solid waste management authority. A proposal to modify a permit may be subject to public notice and 30 days of public review if the proposed modification includes:

1. An increase in the amount or type of solid wastes managed at the site which is inconsistent with the permitted

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design, operational plans or municipal plans concerning the management of solid waste;

- 2. A change in the manner of waste management at the site which is inconsistent with the permitted design or operational plans of the site;*
- 3. A substantive change in the:*
 - (a) Permitted design of the site;*
 - (b) Plans for closure and postclosure;*
 - (c) Procedures for monitoring the site and for taking any necessary corrective actions; or*
 - (d) The mechanisms for financial assurance; and*
- 4. Any other change which is deemed by the solid waste management authority to require public notice and a public hearing.*

Sec. 30. A Class I site must comply with the minimum requirements set forth in NAC 444.677 to 444.702, inclusive, and sections 2 to 61, inclusive, of this regulation. A Class I site which fails to comply with these minimum requirements shall be deemed to be an open dump for the purposes of solid waste planning and is prohibited.

Sec. 31. The owner or operator of a municipal solid waste landfill unit shall:

- 1. Develop and carry out a program for quality assurance and quality control for the construction of all liner systems required by section 42 of this regulation; and*
- 2. Submit a summary of this program to the solid waste management authority before waste may be placed in the municipal solid waste landfill unit.*

Sec. 32. A plan for closing a Class I site must include:

- 1. A description of the actions necessary to close all municipal solid waste landfill units within the site at any time during their active life;*
- 2. A description of the final cover required by sections 69, 70 and 71 of this regulation;*
- 3. An estimate of the largest area of the municipal solid waste landfill unit which would require final cover at any time during the active life of the unit if the site is closed;*
- 4. An estimate of the total maximum inventory of wastes to be placed on the disposal site during the entire estimated life of the site;*
- 5. The equipment and structures for the removal of wastes, decommissioning and decontamination;*
- 6. The placement and installation of devices to monitor or control water, vadose zone and landfill gases, if necessary; and*
- 7. A schedule for completing all construction and related activities needed to close the disposal site in accordance with sections 69, 70 and 71 of this regulation.*

Sec. 33. The owner or operator of a Class I site shall maintain a copy of the plans for closure and postclosure in the operating records of the site. To receive a permit to operate the disposal site, the plans for closure and postclosure must be placed in the operating records of the disposal site by October 9, 1993, or by the initial receipt of waste, whichever is later. The owner or operator shall notify the solid waste management authority immediately upon placing the plans in its operating records. The owner or operator shall include the plans for closure and postclosure in his application for a permit to operate the site.

Sec. 34. 1. A plan for postclosure which specifies how and at what frequency a municipal solid waste landfill unit will be maintained and monitored during the period of

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postclosure must include:

- (a) A program for monitoring water which complies with the requirements of sections 43 to 61, inclusive, of this regulation;*
- (b) A program for the inspection and maintenance of:*
 - (1) The final cover;*
 - (2) Structures for drainage and protection from floods; and*
 - (3) Systems for monitoring and controlling landfill gases;*
- (c) The name, address, and telephone number of the person or office to contact about the unit during the period of postclosure;*
- (d) A description of the planned uses of the property during the period of postclosure; and*
- (e) Any other information which the solid waste management authority may require.*

2. Any use of the property during or after the period of postclosure must not disturb the integrity of the final cover, liners, any other components of the system for containment or the function of the monitoring system unless necessary to comply with the requirements of NAC (444.570) 444.478 to (444.478) 444.748, inclusive, and sections 2 to 87, inclusive, of this regulation.

Sec. 35. 1. A Class I site must meet the following safety requirements relating to airports:

(a) An owner or operator of a new or existing municipal solid waste landfill unit or a lateral expansion which is located:

- (1) Within 10,000 feet of the end of any airport runway used by a turbojet aircraft; or*
- (2) Within 5,000 feet of the end of any airport runway used only by piston-type aircraft, shall maintain proof that the unit or lateral expansion is designed and operated so that it does not pose a hazard to birds.*
- (b) The owner or operator shall place the proof in the operating record of the municipal solid waste landfill unit and notify the solid waste management authority that the proof has been placed in the operating records.*
- (c) The owner or operator who proposes to locate a new municipal solid waste landfill unit or lateral expansion within a 5-mile radius of the end of any airport runway used by a turbojet or piston-type aircraft shall notify the affected airport and the Federal Aviation Administration.*

2. As used in this section:

- (a) "Airport" means any public airport.*
- (b) "Hazard to birds" means an increase in the likelihood of a collision between a bird and an aircraft that may cause damage to the aircraft or injury to its occupants.*

Sec. 36. 1. The owner or operator of a new or existing municipal solid waste landfill unit or lateral expansion located in a 100-year floodplain shall maintain proof that the unit or lateral expansion will not:

- (a) Restrict the flow of the floodplain;*
- (b) Reduce the temporary capacity of the floodplain to store water; and*
- (c) Result in the washout of solid waste that poses a hazard to public health and safety and the environment.*

2. The owner or operator shall place the proof in the operating records of the municipal solid waste landfill unit and notify the solid waste management authority that the proof has been placed within the operating records.

3. As used in this section, "100-year floodplain" means the lowland and the relatively flat lands adjoining the waters that are inundated by a 100-year flood.

Sec. 37. 1. A new municipal solid waste landfill unit or a lateral expansion may not be located in wetlands

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unless the owner or operator satisfactorily demonstrates to the solid waste management authority and the administrator that:

(a) The presumption, if applicable pursuant to section 404 of the federal Clean Water Act of 1977 (33 U.S.C. § 1344), as that section existed on the effective date of this regulation, that a practicable alternative to the proposed unit or lateral expansion is available which does not involve wetland is clearly rebutted.

(b) The construction and operation of the municipal solid waste landfill unit or lateral expansion will not:

(1) Cause or contribute to violations of any applicable state water quality standard set forth in NAC 445.244 to 445.262, inclusive;

(2) Violate any applicable toxic effluent standard or prohibition set forth in section 307 of the federal Clean Water Act of 1977 (33 U.S.C. § 1317), as that section existed on the effective date of this regulation;

(3) Jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of a critical habitat, protected by the federal Endangered Species Act of 1973 (16 U.S.C. §§ 1531 et seq.), as that act existed on the effective date of this regulation; and

(4) Violate any requirement set forth in the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. §§ 1401 et seq.), for the protection of a marine sanctuary, as that act existed on the effective date of this regulation.

(c) The site will not cause or contribute to any significant degradation of the wetlands. The owner or operator shall demonstrate the integrity of the municipal solid waste landfill unit or lateral expansion and its ability to protect ecological resources by showing:

(1) The potential erosion, stability and migration of the soils, muds and deposits of the wetlands that are used to support the site;

(2) The potential erosion, stability and migration of dredged and fill materials used to support the site;

(3) The volume and chemical composition of the waste managed at the site;

(4) The potential impact on fish, wildlife and other aquatic resources and their habitat;

(5) The potential effects of a catastrophic release of waste to the wetlands and the resulting impacts on the environment; and

(6) Any additional factors required by the solid waste management authority to show that the ecological resources in the wetlands are protected.

(d) To the extent required by section 404 of the Clean Water Act (33 U.S.C. § 1344), as that section existed on the effective date of this regulation, or any applicable state laws, actions have been taken to attempt to achieve no net loss of wetlands, as defined by acreage and function, by first avoiding impacts to wetlands to the maximum extent practicable as required by paragraph (a), then minimizing the unavoidable impacts to the maximum extent practicable, and then offsetting the remaining unavoidable impacts on the wetlands through all appropriate and practicable mitigation actions such as restoration of existing degraded wetlands or the creation of a man-made wetland.

(e) Sufficient information is available to make a reasonable determination with respect to these demonstrations.

2. As used in this section, "wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and which under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils, including swamps, marshes, bogs and other similar areas.

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Sec. 38. 1. A new municipal solid waste landfill unit or lateral expansion must not be located within 200 feet of a fault that has had a displacement in Holocene time unless the owner or operator demonstrates to the solid waste management authority that an alternative setback distance of less than 200 feet will prevent damage to the structural integrity of the unit and will protect public health and safety and the environment.

2. As used in this section:

(a) "Displacement" means the relative movement of any two sides of a fault measured in any direction.

(b) "Fault" means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

(c) "Holocene" means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present.

Sec. 39. 1. A new municipal solid waste landfill unit or lateral expansion may not be located in a seismic impact zone, unless the owner or operator submits proof to the solid waste management authority that all structures for containment, including liners, systems for the collection of leachate and systems for the control of surface water, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. The owner or operator shall place the proof in the operating records for the site and notify the solid waste management authority that the proof has been placed in the operating records.

2. As used in this section:

(a) "Lithified earth material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock which formed by the crystallization of magma or by the induration of loose sediments. The term does not include man-made materials, such as fill, concrete and asphalt, or unconsolidated earth materials, soils or regolith lying at or near the surface of the earth.

(b) "Maximum horizontal acceleration" means the maximum expected horizontal acceleration depicted on a seismic hazard map with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a seismic risk assessment for the specific site.

(c) "Seismic impact zone" means an area with a 10 percent or greater probability that the maximum horizontal acceleration in lithified earth material will exceed 10 percent of the earth's gravitational pull in 250 years, as determined by referencing the United States Geological Survey, Open File Report 82-1033, "Probabilistic Estimates of Maximum Acceleration and Velocity in Rock in the Contiguous United States," or by consulting state seismicity maps for Nevada which are available from the Nevada Bureau of Mines and Geology.

Sec. 40. 1. The owner or operator of a new or existing municipal solid waste landfill unit or a lateral expansion located in an unstable area shall maintain proof that engineering measures have been incorporated into the structural design of the unit or lateral expansion to ensure that the integrity of the unit or lateral expansion will not be disrupted. The owner or operator shall place the proof in the design report and the operating records of the unit and notify the solid waste management authority that the proof has been placed in the operating records.

2. To determine if an area is unstable, the owner or operator shall consider:

(a) Conditions of the soil on or near the site which may result in a significant differential settling;

(b) Geologic or geomorphic features on or near the site; and

(c) Man-made features or events which are on the surface or subsurface.

3. As used in this section:

(a) "Areas susceptible to mass movement" means those areas where the movement of earth material at,

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beneath or adjacent to the unit, because of natural or man-made features, results in the downslope movement of soil and rock by means of gravitational influence. The term includes, but is not limited to, areas with landslides, avalanches, debris, slides and flows, block slidings and rock falls.

(b) "Karst terranes" means areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of the dissolution of limestone, dolomite or soluble rock. The term includes, but is not limited to, areas with sinkholes, sinking streams, caves, large springs and blind valleys.

(c) "Poor foundation conditions" means those areas with features which indicate that a natural or man-made event may result in an inadequate foundation for the structural components of a municipal solid waste landfill unit or lateral expansion.

(d) "Structural components" means liners, systems for leachate collection, final cover, systems for runoff or runoff and any other component used in the construction and operation of a municipal solid waste landfill unit which is necessary for the protection of public health and safety and the environment.

(e) "Unstable area" means a location which is susceptible to natural or man-made features that are capable of impairing the integrity of some or all of the structural components of a municipal solid waste landfill unit that will prevent the release of the solid waste, or any by-product thereof, from that landfill. The term includes poor foundation conditions, areas susceptible to mass movements and karst terranes.

Sec. 41. 1. *Except as otherwise provided in this section, an existing municipal solid waste landfill unit which does not file the proof required by sections 35, 36 and 40 of this regulation must close by October 9, 1996, in accordance with sections 69, 70 and 71 of this regulation, and must conduct postclosure activities in accordance with section 72 of this regulation.*

2. *The deadline for closure required by this section may be extended for not more than 2 years if the owner or operator demonstrates to the solid waste management authority that there is:*

- (a) No available alternative for the disposal of waste; and*
- (b) No immediate threat to public health and safety and the environment.*

Sec. 42. 1. *A new municipal solid waste landfill unit or lateral expansion must be constructed:*

(a) In accordance with a design approved by the solid waste management authority that is sufficient to protect the waters of the state from degradation by pollutants or contaminants; or

(b) With a composite liner and a system for the collection of leachate which is designed and constructed to maintain less than a 30-centimeter depth of leachate over the liner. The composite liner must have an upper component consisting of a flexible membrane liner of at least 30 mils and a lower component consisting of a layer of compacted soil that is at least 2 feet with a hydraulic conductivity of no more than 10^{-7} centimeters per second. Components of the flexible membrane liner consisting of high density polyethylene must be at least 60 mils. The flexible membrane liner must be installed in direct and uniform contact with the compacted soil.

2. *To approve the design of a new municipal solid waste landfill unit or lateral expansion, the solid waste management authority shall consider:*

- (a) The hydrogeologic characteristics of the facility and surrounding land;*
- (b) The climate of the area;*
- (c) The volume and physical and chemical characteristics of the anticipated leachate; and*
- (d) Any other relevant factors.*

Sec. 43. 1. *The requirements for monitoring ground water set forth in sections 45 to 54, inclusive, of this*

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regulation may be suspended by a solid waste management authority for a municipal solid waste landfill unit in a Class I site if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that unit to the uppermost aquifer during the active life of the unit, including the period of closure and postclosure. The demonstration must be certified by a qualified ground water scientist and approved by the solid waste management authority. The demonstration must be based upon:

- (a) Measurements collected at specific field sites and the sampling and analysis of physical, chemical, and biological processes affecting the fate and transportation of contaminants; and*
- (b) Predictions of the fate and transportation of contaminants which are based on the maximum possible distance of the migration of the contaminants and a consideration of the impacts on public health and safety and the environment.*

2. Except as otherwise provided in section 44 of this regulation, the owner or operator of a municipal solid waste landfill unit in a Class I site shall comply with the requirements for monitoring ground water according to the following schedule:

- (a) An existing municipal solid waste landfill unit and lateral expansion that is less than 1 mile from a surface or subsurface intake for drinking water must comply with sections 45 to 54, inclusive, of this regulation by October 9, 1994.*
- (b) An existing municipal solid waste landfill unit and lateral expansion that is at least 1 mile but less than 2 miles from a surface or subsurface intake for drinking water must comply with sections 45 to 54, inclusive, of this regulation by October 9, 1995.*
- (c) An existing municipal solid waste landfill unit and lateral expansion that is at least 2 miles from a surface or subsurface intake for drinking water must comply with sections 45 to 54, inclusive, of this regulation by October 9, 1996.*
- (d) A new municipal solid waste landfill unit must comply with sections 45 to 54, inclusive, of this regulation before waste may be placed in the unit.*

3. Once monitoring of ground water begins at a municipal solid waste landfill unit, the owner or operator of the unit shall continue to monitor the ground water throughout the active life of the unit, including the period of closure and postclosure, as specified in section 72 of this regulation.

Sec. 44. 1. *A solid waste management authority may establish an alternative schedule for the owners or operators of existing municipal solid waste landfill units or lateral expansions within the area of its jurisdiction to comply with sections 45 to 61, inclusive, of this regulation. The schedule must ensure that at least 50 percent of all existing municipal solid waste landfill units within the area of its jurisdiction are in compliance by October 9, 1994 and all existing municipal solid waste landfill units within the area of its jurisdiction are in compliance by October 9, 1996. In establishing the schedule for compliance, the solid waste management authority shall consider potential risks posed by the units or lateral expansions to public health and safety and the environment, including the:*

- (a) Proximity of persons and environmental conditions that may be affected by those risks;*
- (b) Design of the municipal solid waste landfill unit;*
- (c) Age of the municipal solid waste landfill unit;*
- (d) Size of the municipal solid waste landfill unit;*
- (e) Types and quantities of wastes disposed of at the unit, including sewage sludge; and*
- (f) Resource value of the underlying aquifer, including:*
 - (1) Its current and future uses;*
 - (2) Its proximity and rate of withdrawal of users; and*
 - (3) The quality and quantity of ground water.*

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2. *The solid waste management authority may establish alternative schedules for demonstrating compliance with:*

- (a) The provisions of section 45 of this regulation that require notification of the placement of the certification in the operating plan;*
- (b) The provisions of section 51 of this regulation relating to:*
 - (1) Notification and the placement of the notice in the operating record of any statistically significant increase in levels of constituents listed in appendix I; and*
 - (2) The program for assessment monitoring;*
- (c) The provisions of section 52 of this regulation relating to:*
 - (1) The sampling and analyzing of constituents listed in appendix II;*
 - (2) Placement in the operating record of the notice that constituents listed in appendix II have been detected and notification of that notice; and*
 - (3) Sampling for constituents listed in appendix I or II;*
- (d) The provisions of section 53 of this regulation relating to notification and the placement of the notice in the operating record of any statistically significant increase above the standard for the protection of ground water;*
- (e) The provisions of sections 53 and 55 of this regulation relating to the assessment of corrective measures;*
- (f) The provisions of section 56 of this regulation relating to the selection of a remedy and notification of the placement of documents relating to the selection in the operating record; and*
- (g) The provisions of sections 60 and 61 of this regulation relating to the notification of the placement in the operating record of:*
 - (1) Alternative measures of corrective action; and*
 - (2) Certification of the completion of the remedy.*

Sec. 45. 1. *The owner or operator of a municipal solid waste landfill unit shall install a system for monitoring ground water which consists of a sufficient number of wells, installed at appropriate locations and depths, to yield samples of ground water from the uppermost aquifer which:*

(a) Represent the quality of background ground water which has not been affected by leakage from the unit. A determination of background quality may include the sampling of wells that are not hydraulically upgradient of the waste management area if:

(1) Hydrogeologic conditions do not allow the owner or operator to determine which wells are hydraulically upgradient; or

(2) Sampling at other wells will provide an indication of the quality of the background ground water which is as representative or more representative than that provided by the upgradient wells.

(b) Represent the quality of ground water at the boundary of the waste management unit. The monitoring system must be installed to ensure detection of contaminants in the ground water in the uppermost aquifer. When physical obstacles preclude installation of wells to monitor ground water at the boundary of the waste management unit, a downgradient monitoring system may be installed at the closest practicable distance hydraulically downgradient from the boundary which ensures detection of contamination of ground water in the uppermost aquifer.

2. *If a disposal site has more than one municipal solid waste management landfill unit, the solid waste management authority may approve a system for monitoring ground water with multiple units instead of separate systems for each municipal solid waste landfill unit, if the system complies with the requirements of subsection 1 and is as protective of public health and safety and the environment as the separate systems. To approve a system with multiple units, the solid waste management authority shall consider the:*

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- (a) Number, spacing and orientation of the municipal solid waste landfill units;*
- (b) Hydrogeologic setting;*
- (c) History of the disposal site;*
- (d) Engineering design of the municipal solid waste landfill units; and*
- (e) Type of waste accepted at the municipal solid waste landfill units.*

3. Monitoring wells must be cased in a manner which maintains the integrity of the bore hole of the monitoring well. The casing must be screened or perforated and packed with gravel or sand, if necessary, to enable the collection of samples of ground water. The annular space above the sampling depth must be sealed to prevent contamination of samples and the ground water.

4. The owner or operator shall notify the solid waste management authority that documentation concerning the design, installation, development and decommission of any monitoring wells, piezometers and other measurement, sampling and analytical devices has been placed in the records of the site. The monitoring wells, piezometers and other measurement, sampling and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

5. The number, spacing and depths of the monitoring systems must be:

(a) Determined based upon technical information for each specific site, including a thorough characterization of the:

(1) Thickness of the aquifer and the rate and direction of the flow of ground water, including seasonal and temporal fluctuations; and

(2) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, without limitation, the thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities of these materials; and

(b) Certified by a qualified ground water scientist and approved by the solid waste management authority. Within 14 days after receiving certification and approval, the owner or operator shall place the certification in the records for the site.

6. As used in this section:

(a) "Annular space" means the space between the bore hole and well casing.

(b) "Boundary of the waste management unit" means a vertical surface located at the hydraulically downgradient limit of the unit that extends down in the uppermost aquifer.

Sec. 46. 1. The owner or operator shall notify the solid waste management authority that the documentation of the program for sampling and analysis has been placed in the records of the disposal site.

2. A system for monitoring ground water must include:

(a) Consistent sampling and analytical procedures designed to ensure monitoring results which provide an accurate representation of the quality of the background and downgradient ground water at the monitoring wells installed in compliance with section 45 of this regulation.

(b) Procedures and techniques for:

(1) The collection, preservation and shipments of samples;

(2) Analyzing samples;

(3) The control of the chain of custody; and

(4) Quality assurance and quality control.

(c) Methods for sampling and analysis which are appropriate for sampling ground water and which

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accurately measure hazardous constituents and other monitoring parameters in samples of ground water. Samples of ground water must not be filtered in the field before they are analyzed in the laboratory.

3. The sampling procedures and frequency must be protective of public health and safety and the environment.

4. Each time ground water is sampled, the elevations of ground water must be measured in each well immediately before purging and the owner or operator shall determine the rate and direction of the flow of ground water. The elevations of ground water in wells which monitor the same disposal site must be measured within a period that is short enough to avoid temporal variations in the flow of ground water which could preclude an accurate determination of the rate of flow and direction of ground water.

5. The owner or operator shall determine the quality of the background ground water in a hydraulically upgradient or background well for each of the monitoring parameters or constituents required by the system for monitoring ground water which applies to the municipal solid waste landfill unit, as determined pursuant to section 49 or 51 of this regulation. The quality of the background ground water may be determined at wells that are not located hydraulically upgradient from the municipal solid waste landfill unit if the monitoring system meets the requirements of section 45 of this regulation.

6. The number of samples collected to establish data concerning the quality of ground water must be consistent with the appropriate statistical procedures set forth in section 47 of this regulation. The sampling procedures used must be those specified by section 50 of this regulation for detection monitoring, section 52 of this regulation for assessment monitoring, and section 55 of this regulation for corrective action.

Sec. 47. 1. An owner or operator shall specify in the records for the disposal site one of the following statistical methods to be used in evaluating data from monitoring ground water for each hazardous constituent:

(a) A parametric analysis of variance followed by procedures for multiple comparisons procedures to identify statistically significant evidence of contamination. This method must include an estimation and testing of the contrasts between the mean for each compliance well and the background mean levels for each constituent.

(b) An analysis of variance based on ranks followed by procedures for multiple comparisons to identify statistically significant evidence of contamination. This method must include an estimation and testing of the contrasts between the median for each compliance well and the background median levels for each constituent.

(c) A procedure using tolerance or predictional intervals whereby an interval for each constituent is established from the distribution of the background data and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

(d) A procedure using a control chart which gives limits of control for each constituent.

(e) Any other statistical method which meets the performance standards set forth in subsection 3. The owner or operator shall place a written justification for using the statistical method in the operating records for the disposal site and notify the solid waste management authority of the use of this alternative method. The justification must demonstrate that the alternative method meets the performance standards set forth in subsection 2.

2. The statistical method chosen pursuant to this section must be conducted separately for each hazardous constituent in each well.

3. Any statistical method chosen pursuant to this section must comply with the following performance standards, as appropriate:

(a) The statistical method used to evaluate data from monitoring ground water must be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data must be transformed or a theory test that does not use data from the distribution of chemical parameters or hazardous

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constituents must be used. If the distributions for the constituents differ, more than one statistical method may be used, if needed.

(b) If a procedure which compares individual wells is used to compare the concentration of constituents for an individual compliance well with background concentrations of constituents or a standard for the protection of ground water, the test must be done at a Type I error level that is no less than 0.01 for each testing period. If a procedure using multiple comparisons is used, the Type I error level for each testing period must be no less than 0.05, and the Type I error level of no less than 0.01 for comparisons of individual wells must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals or control charts.

(c) If a control chart is used to evaluate data, the control chart and its associated values for its parameters must be protective of public health and safety and the environment. The parameters must be determined after considering the number of samples in the background data base, the distribution of data and the range of the concentration values for each constituent.

(d) If a tolerance interval or a predictional interval is used to evaluate data from monitoring ground water, the levels of confidence and, for tolerance intervals, the percentage of the population of samples which the interval must contain, must be protective of public health and safety and the environment. These parameters must be determined after considering the number of samples in the background data base, the data distribution and the range of the concentration values for each constituent of concern.

(e) The statistical method must account for data below the limit of detection with one or more statistical procedures which are protective of public health and safety and the environment. Any practical quantitation limit which is used in the statistical method must be the lowest concentration level which can be reliably achieved within specified limits of precision and accuracy during routine conditions for the operation of a laboratory which are available to the disposal site.

(f) If necessary, the statistical method must include procedures to control or correct for seasonal and spatial variability and temporal correlation in the data.

4. As used in this section, "Type I error" means an error which occurs when a true null hypothesis is rejected erroneously and, as a result, a test for the monitoring of ground water incorrectly indicates contamination or an increase in contamination at a regulated unit.

Sec. 48. 1. *Within 14 days after completing sampling and analysis, the owner or operator shall determine whether there is a statistically significant increase over background values for each parameter or constituent at each monitoring well required in the system for monitoring ground water which applies to the municipal solid waste landfill unit, as determined pursuant to section 49 or 52 of this regulation.*

2. In determining whether a statistically significant increase has occurred, the owner or operator shall compare the quality of the ground water of each parameter or constituent at each monitoring well designated pursuant to section 45 of this regulation to the background value of that constituent, according to the statistical procedures and performance standards set forth in section 47 of this regulation.

Sec. 49. 1. *An owner or operator shall monitor constituents at all wells monitoring ground water pursuant to section 45 of this regulation. At a minimum, the constituents listed in appendix I must be monitored.*

2. The solid waste management authority may delete any of the parameters for monitoring constituents listed in appendix I for a municipal solid waste landfill unit if it is shown that the deleted constituents are not reasonably expected to be contained in or derived from the waste contained in the unit.

3. The solid waste management authority may establish a list of alternative parameters for inorganic materials

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for a municipal solid waste landfill unit, in lieu of any of the following:

- (a) Antimony;*
- (b) Arsenic;*
- (c) Barium;*
- (d) Beryllium;*
- (e) Cadmium;*
- (f) Chromium;*
- (g) Cobalt;*
- (h) Copper;*
- (i) Lead;*
- (j) Nickel;*
- (k) Selenium;*
- (l) Silver;*
- (m) Thallium;*
- (n) Vanadium; and*
- (o) Zinc,*

if the alternative parameters provide a reliable indication of releases of inorganic materials from the municipal solid waste landfill unit into the ground water.

4. In establishing alternative parameters, the solid waste management authority shall consider:

- (a) The types, quantities and concentrations of constituents in waste managed at the municipal solid waste landfill unit;*
 - (b) The mobility, stability and persistence of constituents or their reaction products in the unsaturated zone beneath the municipal solid waste landfill unit;*
 - (c) The detectability of indicator parameters, constituents and reaction products in the ground water;*
- and*
- (d) The concentration or values and coefficients of variation of monitoring parameters or constituents in the ground water background.*

Sec. 50. 1. *Except as otherwise provided in subsection 2, all constituents listed in appendix I or in the list of alternative parameters established pursuant to section 49 of this regulation must be monitored at least semiannually during the active life of a municipal solid waste landfill unit, including the period of closure and postclosure. At least four independent samples from each background and downgradient well must be collected and analyzed for the constituents during the first semiannual sampling. At least one sample from each background and downgradient well must be collected and analyzed during subsequent semiannual sampling.*

2. *The solid waste management authority may specify an appropriate alternative schedule for monitoring constituents listed in appendix I or the list of alternative parameters. The alternative schedule may require monitoring not less than annually. The alternative schedule must be based on the:*

- (a) Lithology of the aquifer and unsaturated zone;*
- (b) Hydraulic conductivity of the aquifer and unsaturated zone;*
- (c) Rate of flow of ground water;*
- (d) Minimum distance between the upgradient edge of the municipal solid waste landfill unit and downgradient monitoring well screen; and*
- (e) Resource value of the aquifer.*

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Sec. 51. 1. If an owner or operator determines, pursuant to section 47 of this regulation, that there is a statistically significant increase over background for one or more of the constituents listed in appendix I or the list of alternative parameters established pursuant to section 49 of this regulation, at any monitoring well at the boundary specified by section 45 of this regulation, the owner or operator shall:

(a) Within 14 days after making this determination, place a notice in the records of the disposal site indicating which constituents have shown statistically significant increases and notify the solid waste management authority that this notice was placed in the operating records; and

(b) Except as otherwise provided in subsection 2, establish a program for assessment monitoring pursuant to sections 52 and 53 of this regulation within 90 days after making the determination.

2. The owner or operator may demonstrate that a source other than a municipal solid waste landfill unit caused the contamination or that the statistically significant increase resulted from an error in sampling, analysis or statistical evaluation or from a natural variation in the quality of ground water. A report documenting this demonstration must be certified by a qualified ground water scientist, approved by the solid waste management authority and placed in the operating records of the disposal site. If a successful demonstration is made and approved, the owner or operator may continue monitoring constituents as specified in this section and sections 49 and 50 of this regulation. If, after 90 days, a successful demonstration is not made, the owner or operator shall initiate a program for assessment monitoring pursuant to sections 52 and 53 of this regulation.

Sec. 52. 1. If a statistically significant increase over background has been detected for one or more of the constituents listed in appendix I or the list of alternative parameters established pursuant to section 49 of this regulation, an owner or operator shall establish a program for assessment monitoring.

2. Except as otherwise provided in subsection 3, within 90 days after initiating a program for assessment monitoring, and annually thereafter, the owner or operator shall sample and analyze the ground water for all constituents identified in appendix II. At least one sample from each downgradient well must be collected and analyzed during each sampling. For any constituent detected in the downgradient wells as a result of this analysis, at least four independent samples from each background and downgradient well must be collected and analyzed to establish background for the constituents. The solid waste management authority may specify an appropriate subset of wells to be sampled and analyzed for constituents listed in appendix II during assessment monitoring. The solid waste management authority may delete any of the parameters for monitoring constituents listed in appendix II for a municipal solid waste landfill unit if it is shown that the deleted constituents are not reasonably expected to be in or derived from the waste contained in the unit.

3. The solid waste management authority may specify an appropriate alternative schedule for monitoring all constituents listed in appendix II. The alternative schedule must be based on the:

(a) Lithology of the aquifer and unsaturated zone;

(b) Hydraulic conductivity of the aquifer and unsaturated zone;

(c) Rate of flow of ground water;

(d) Minimum distance between the upgradient edge of the municipal solid waste landfill unit and downgradient monitoring well screen;

(e) Resource value of the aquifer; and

(f) Nature, fate and transportation of any constituents detected in accordance with this section.

4. After obtaining the results from the initial or subsequent samplings pursuant to subsection 2 or 3, the owner or operator shall:

(a) Within 14 days, place a notice in the operating records of the disposal site identifying the constituents

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listed in appendix II which have been detected and submit the sampling results to the solid waste management authority.

(b) Within 90 days, and on at least a semiannual basis thereafter:

(1) Resample all wells specified by section 45 of this regulation;

(2) Conduct analyses for all constituents listed in appendix I or the list of alternative parameters established pursuant to section 49 of this regulation, and for those constituents in appendix II which are detected as a result of sampling pursuant to subsection 2 or 3; and

(3) Record their concentrations in the operating records for the disposal site. At least one sample from each background and downgradient well must be collected and analyzed during the samplings. The solid waste management authority may specify an alternative schedule for monitoring the constituents referred to in this section. The alternative schedule for constituents listed in appendix I or the list of alternative parameters established pursuant to section 49 of this regulation may not require monitoring not less than annually. The alternative schedule must be based on the factors specified in subsection 3.

(c) Establish background concentrations for any constituents detected pursuant to paragraph (b) or subsection 2 or 3.

Sec. 53. 1. *If the concentrations of all constituents listed in appendix II are shown to be at or below background values, using the statistical procedures set forth in section 47 of this regulation, for two consecutive samplings, the owner or operator shall notify the solid waste management authority of this finding and may return to the monitoring procedures set forth in section 50 of this regulation.*

2. If the concentrations of any constituents listed in appendix II are above background values, but all concentrations are below the standard for the protection of ground water established pursuant to section 54 of this regulation, using the statistical procedures in section 47 of this regulation, the owner or operator shall continue monitoring in accordance with this section.

3. Except as otherwise provided in subsection 4, if one or more constituents listed in appendix II are detected at statistically significant levels above the standard for the protection of ground water in any sampling, the owner or operator shall:

(a) Within 14 days of this finding, place a notice in the operating records for the disposal site identifying the constituents which have exceeded the standard and notify the solid waste management authority and all appropriate local government officials that the notice has been placed in the operating records;

(b) Characterize the nature and extent of the release by installing additional monitoring wells as necessary;

(c) Install at least one additional monitoring well at the boundary of the municipal solid waste landfill unit in the direction of the migration of the contaminant and sample this well in accordance with section 52 of this regulation;

(d) Notify all persons who own or reside on the land which directly overlies any part of the plume of contamination if contaminants have migrated off the site as indicated by the sampling of wells in accordance with this section; and

(e) Initiate an assessment of corrective measures pursuant to section 55 of this regulation.

4. *In lieu of complying with the provisions of subsection 3, the owner or operator may demonstrate that a source other than a municipal solid waste landfill unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis or statistical evaluation or from a natural variation in the quality of the ground water. A report documenting this demonstration must be certified by a qualified ground water scientist, approved by the solid waste management authority and placed in the operating records of the unit. If a successful*

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demonstration is made, the owner or operator shall continue monitoring in accordance with the program for assessment pursuant to this section, and may return to detection monitoring if the constituents are at or below background in accordance with subsection 1. Until a successful demonstration is made, the owner or operator shall comply with the provisions of subsection 3.

Sec. 54. 1. The administrator shall establish a standard for the protection of ground water for each constituent listed in appendix II detected in the ground water as follows:

(a) For a constituent for which a maximum contaminant level has been set forth pursuant to the Safe Drinking Water Act, (42 U.S.C. §§ 300f et seq.), and 40 C.F.R. Part 141, as those sections existed on the effective date of this regulation, the maximum contaminant level for that constituent.

(b) For a constituent for which a maximum contaminant level has not been adopted, the level which is consistent with NRS 445.131 to 444.354, inclusive, and the regulations adopted pursuant thereto, and is protective of public health and safety and the environment.

(c) For a constituent for which the background level is higher than the maximum contaminant level set forth in paragraph (a) of this subsection, the background concentration.

2. In establishing standards pursuant to paragraph (b) of subsection 1, the administrator may consider:

(a) Multiple contaminants in the ground water;

(b) Potential threats to sensitive areas of the environment; and

(c) Other threats specific to that site or potential threats to ground water.

Sec. 55. 1. Within 90 days after finding that any of the constituents listed in appendix II have been detected at a statistically significant level exceeding the standards for the protection of ground water established pursuant to section 54 of this regulation, the owner or operator shall initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period specified by the solid waste management authority and submitted for review and approval by the solid waste management authority.

2. The owner or operator shall continue monitoring in accordance with sections 52 and 53 of this regulation until the solid waste management authority approves the assessment of corrective measures.

3. The assessment must include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy in accordance with sections 56, 57 and 58 of this regulation, including, but not limited to:

(a) The performance, reliability, ease of implementation and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts and the control of exposure to any residual contamination;

(b) The time required to begin and complete the remedy;

(c) The costs of carrying out the remedy; and

(d) Any state or local statutory or regulatory requirements or other environmental or public health and safety requirements which may substantially affect the implementation of the remedy.

4. The solid waste management authority shall issue a public notice and accept public comment for 30 days before the selection of a remedy. If requested during the period of public comment, a public hearing must be held to discuss the assessment of corrective measures.

Sec. 56. 1. Based on the results of the assessment of corrective measures conducted pursuant to section 55 of this regulation and the public comments received, if any, the

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solid waste management authority may approve a remedy which:

(a) Is protective of public health and safety and the environment;

(b) Complies with the standard for the protection of ground water established pursuant to section 54 of this regulation;

(c) Controls the sources of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of constituents listed in appendix II which may pose a threat to the public health and safety or the environment; and

(d) Complies with standards for the management of wastes as specified in subsection 3 of section 60 of this regulation.

2. In selecting a remedy, the solid waste management authority shall consider:

(a) The long-term and short-term effectiveness and protectiveness of a potential remedy, and the degree of certainty that the remedy will prove successful, based on the:

(1) Magnitude of reducing existing risks;

(2) Magnitude of residual risks and the likelihood of further releases caused by waste remaining after the implementation of a potential remedy;

(3) Type and degree of long-term management required, including monitoring, operation and maintenance;

(4) Short-term risks which might be posed to the community, workers or the environment during implementation of a potential remedy, including potential threats to public health and safety and the environment associated with the excavation, transportation, and redisposal or containment of the constituent;

(5) Time until full protection is achieved;

(6) Potential for exposure of persons and environmental conditions to remaining wastes, considering the potential threat to public health and safety and the environment associated with the excavation, transportation, redisposal or containment;

(7) Long-term reliability of the engineering and institutional controls; and

(8) Potential need for the replacement of the remedy.

(b) The effectiveness of the remedy in controlling the source to reduce further releases based on the extent to which:

(1) Practices for containment will reduce further releases; and

(2) Technologies for treatment may be used.

(c) The ease or difficulty of carrying out a potential remedy based on the consideration of the following factors:

(1) The degree of difficulty associated with constructing the technology;

(2) The expected operational reliability of the technologies;

(3) The need to coordinate with and obtain necessary approvals and permits from other agencies;

(4) The availability of necessary equipment and specialists; and

(5) The available capacity and location of needed treatment, storage and disposal services.

(d) The practicable capability of the owner or operator to carry out the remedy, including a consideration of his technical and economic capability.

(e) The degree to which concerns of the community are addressed by the potential remedy.

Sec. 57. An owner or operator shall submit to the solid waste management authority a schedule for initiating and completing remedial activities. The schedule must require the initiation of remedial activities within a reasonable period and must be approved by the solid waste management

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authority. In proposing the schedule, the owner or operator shall consider:

- 1. The extent and nature of contamination;*
- 2. The practical capabilities of remedial technologies in achieving compliance with standards for the protection of ground water established pursuant to section 54 of this regulation and other objectives of the remedy;*
- 3. The availability of systems for the treatment or disposal of wastes managed during the implementation of the remedy;*
- 4. The desirability of utilizing technologies which are experimental or not widely available, but which may offer significant advantages over readily available technologies in terms of effectiveness, reliability, safety or ability to achieve remedial objectives;*
- 5. The potential risks to public health and safety and the environment from exposure to contamination before the completion of the remedy;*
- 6. The resource value of the aquifer, including:*
 - (a) The current and future uses;*
 - (b) The proximity and rate of withdrawal of users;*
 - (c) The quantity and quality of ground water;*
 - (d) The potential damage to wildlife, crops, vegetation and physical structures caused by exposure to a constituent;*
 - (e) The hydrogeologic characteristics of the disposal site and surrounding land;*
 - (f) The cost of removing and treating ground water; and*
 - (g) The cost and availability of alternative water supplies;*
- 7. The practicable capability of the owner or operator to carry out the remedial activities; and*
- 8. Any other relevant factors.*

Sec. 58. 1. *The solid waste management authority and the administrator may jointly determine that remediation of a release of a constituent listed in appendix II from a municipal solid waste landfill unit is not necessary if the owner or operator demonstrates to the solid waste management authority and the administrator that:*

(a) The ground water is additionally contaminated by substances that have originated from a source other than a municipal solid waste landfill unit and those substances are present in such concentrations that the clean up of the release from the municipal solid waste landfill unit would provide no significant reduction in risk to persons or environmental conditions that are or may be affected by the release;

(b) The constituents are present in ground water which:

(1) Is not currently or reasonably expected to be a source of drinking water; and

(2) Is not hydraulically connected with waters to which the constituents are migrating or are likely to migrate in concentrations which would exceed the standards for the protection of ground water established pursuant to section 54 of this regulation;

(c) Remediation of the releases is technically impracticable; or

(d) Remediation would result in unacceptable cross-media impacts.

2. *The provisions of subsection 1 do not affect the authority of the administrator or solid waste management authority to require the owner or operator to undertake measures to control the source of the constituent or any other measures which may be necessary to:*

(a) Eliminate or minimize further releases to the ground water;

(b) Prevent exposure of the ground water to constituents; or

(c) Remediate the ground water to concentrations which are technically practicable and significantly

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reduce threats to public health and safety and the environment.

Sec. 59. *Based on the schedule established pursuant to section 57 of this regulation for the initiation and completion of remedial activities, the owner or operator shall:*

- 1. Establish and carry out a program for monitoring the corrective action for the ground water which:*
 - (a) At a minimum, meets the requirements for monitoring set forth in sections 52 and 53 of this regulation;*
 - (b) Indicates the effectiveness of the remedy; and*
 - (c) Demonstrates compliance with the standard for the protection of ground water in accordance with paragraph (b) of subsection 1 of section 61 of this regulation;*
- 2. Carry out the remedy selected pursuant to sections 56, 57 and 58 of this regulation; and*
- 3. Take any interim measures necessary to ensure the protection of public health and safety and the environment. Interim measures must, to the greatest extent practicable, be consistent with the objectives, and contribute to the performance, of any remedy which may be required pursuant to sections 56, 57 and 58 of this regulation. In determining whether interim measures are necessary, the owner or operator shall consider:*
 - (a) The time required to develop and carry out a final remedy;*
 - (b) The actual or potential exposure of nearby populations or environmental conditions to hazardous constituents;*
 - (c) The actual or potential contamination of supplies for drinking water or sensitive ecosystems;*
 - (d) The further degradation of the ground water which may occur if remedial action is not initiated expeditiously;*
 - (e) Weather conditions which may cause hazardous constituents to migrate or be released;*
 - (f) The risk of fire or explosion, or the potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and*
 - (g) Any other situations which may pose threats to public health and safety and the environment.*

Sec. 60. 1. *The solid waste management authority may determine, based on information developed after the initiation of a remedy or any other information, that compliance with the requirements of section 56 of this regulation is not being achieved by the remedy selected. If the solid waste management authority makes such a determination, the owner or operator shall carry out any other method or technique which could practicably comply with the requirements, unless the solid waste management authority determines pursuant to subsection 2 that compliance cannot be practicably achieved.*

2. If the solid waste management authority and the administrator determine that compliance with the requirements of section 56 of this regulation cannot be practically achieved with any currently available methods, the owner or operator shall:

- (a) Obtain certification from a qualified ground water scientist and the approval of the solid waste management authority and administrator that compliance with section 56 of this regulation cannot be practically achieved with any currently available methods;*
- (b) Carry out alternative measures to control exposure of persons or the environment to residual contamination, as necessary to protect public health and safety and the environment;*
- (c) Carry out alternate measures for the control of the sources of contamination, or for the removal or decontamination of equipment, units, devices or structures which are:*
 - (1) Technically practicable; and*

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(2) Consistent with the overall objective of the remedy; and

(d) Obtain the approval of the solid waste management authority and the administrator for the alternative measures before carrying out those measures.

3. All solid wastes managed pursuant to a remedy required by sections 56, 57 and 58 of this regulation or an interim measure required by section 59 of this regulation must be managed in a manner which:

(a) Is protective of public health and safety and the environment; and

(b) Complies with all applicable requirements set forth in the Resource Conservation and Recovery Act of 1976 (42 U.S.C. §§ 6901 et seq.), as that act existed on the effective date of this regulation.

Sec. 61. 1. A remedy selected pursuant to sections 56, 57 and 58 of this regulation shall be deemed to be complete when each of the following occurs:

(a) The owner or operator complies with the standards for the protection of ground water established pursuant to section 54 of this regulation at all points within the plume of contamination which lie beyond the system of wells for monitoring the ground water established pursuant to section 45 of this regulation.

(b) The owner or operator demonstrates that concentrations of constituents listed in appendix II have not exceeded the standards for the protection of ground water for a period of 3 consecutive years using the statistical procedures and performance standards set forth in section 47 of this regulation. The solid waste management authority and administrator may specify an alternative length of time during which the owner or operator may demonstrate that concentrations of constituents listed in appendix II have not exceeded the standards for the protection of ground water, taking into consideration the:

(1) Extent and concentration of the release;

(2) Behavioral characteristics of the constituents in the ground water;

(3) Accuracy of monitoring or modeling techniques, including any seasonal, meteorological or other environmental variables which may affect the accuracy of those techniques; and

(4) Characteristics of the ground water.

(c) All actions required to complete the remedy have been taken.

2. Within 14 days after the completion of the remedy, the owner or operator shall notify the solid waste management authority that a certification that the remedy has been completed in compliance with the requirements of subsection 1 has been placed in the operating records of the disposal site. The certification must be signed by the owner or operator and a qualified ground water scientist and approved by the solid waste management authority.

3. When, upon completion of the certification, the solid waste management authority determines that the remedy for corrective action has been completed in accordance with the requirements of subsection 1, the owner or operator is no longer required to comply with the requirements for financial assurance for corrective action pursuant to section 75 of this regulation.

Sec. 62. 1. The owner or operator shall carry out a program at the municipal solid waste landfill unit for detecting and preventing the disposal of regulated hazardous waste and PCB wastes. The program must include, but is not limited to:

(a) Random inspections of incoming loads;

(b) Records of inspections;

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(c) *Training persons employed at the unit to recognize regulated hazardous waste and PCB wastes;*
(d) *Procedures for handling hazardous waste or PCB wastes found at the site; and*
(e) *Notification of the solid waste management authority if hazardous waste or PCB wastes are discovered at the unit.*

2. *As used in this section:*

(a) *"Hazardous waste" includes those wastes described by 40 C.F.R. Part 261.3 which are not excluded by 40 C.F.R. Part 261.4(b) or generated by a conditionally exempt small quantity generator in accordance with 40 C.F.R. Part 261.5, as those sections existed on the effective date of this regulation.*

(b) *"PCB" has the meaning ascribed to it in 40 C.F.R. Part 761.3, as that section existed on the effective date of this regulation.*

Sec. 63. 1. *An owner or operator shall provide for the control of explosive gas at the municipal solid waste landfill unit in accordance with the provisions of this section.*

2. *The owner or operator shall ensure that:*

(a) *The concentration of methane gas generated at the unit does not exceed 25 percent of the lower explosive limit for methane in structures, excluding components for any system to control or recover the gas; and*

(b) *The concentration of methane gas does not exceed the lower explosive limit for methane at the boundary of the unit.*

3. *The owner or operator shall carry out a routine program for monitoring methane gas to ensure that the standards set forth in paragraph (a) of subsection 2 are met. The level of methane must be monitored at least quarterly each year. The type and frequency of monitoring must be determined based on the:*

(a) *Conditions of the soil;*

(b) *Hydrogeologic conditions surrounding the unit;*

(c) *Hydraulic conditions surrounding the unit; and*

(d) *Location of the structures and boundaries of the unit.*

4. *If the owner or operator detects levels of methane gas exceeding the limits specified in paragraph (a) of subsection 2, he shall:*

(a) *Immediately take all necessary actions to ensure protection of public health and safety and notify the solid waste management authority;*

(b) *Except as otherwise provided in subsection 5, within 7 days after detection, place in the operating records for the unit the levels of methane gas detected and a description of the actions taken to protect public health and safety; and*

(c) *Except as otherwise provided in subsection 5, within 60 days after detection, carry out a plan for remediation for the releases of methane gas, place a copy of the plan in the operating records and notify the solid waste management authority that the plan has been carried out. The plan must describe the nature and extent of the problem and the proposed remedy.*

5. *The solid waste management authority may establish alternative schedules for demonstrating compliance with paragraphs (b) and (c) of subsection 4.*

6. *As used in this section, "lower explosive limit" means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25EC and at atmospheric pressure.*

Sec. 64. 1. *An owner or operator shall ensure that the municipal solid waste landfill unit does not violate any applicable requirements developed by the state implementation plan, if any, approved or adopted by the administrator of Environmental Protection Agency pursuant to Section 110 of the federal Clean Air Act, as amended, (42 U.S.C. §*

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7410), as that section existed on the effective date of this regulation, and NRS 445.401 to 445.610, inclusive, and the regulations adopted pursuant thereto.

2. Open burning of solid waste, except for the infrequent burning of agricultural wastes, silvicultural wastes, debris from land clearing, diseased trees or debris from emergency clean-up operations, is prohibited at all municipal solid waste landfill units.

Sec. 65. 1. The owner or operator of a Class I site shall provide a system to control run on and runoff.

2. The owner or operator of a Class I site shall design, construct and maintain:

(a) A system to control run on to prevent flow onto the active portion of the landfill during the peak discharge from a 25-year storm; and

(b) A system to control runoff from the active portion of the landfill to collect and control at least the volume of water resulting from a 24-hour, 25-year storm, as those durations and frequencies for storms are defined in the "Precipitation Frequency Atlas of the Western United States," vol. VII-Nevada, stock number 0317-00161, prepared by the National Weather Service and National Oceanic and Atmospheric Administration, United States Department of Commerce. The publication may be obtained from the Superintendent of Documents, United States Government Printing Office, at a cost of \$8.45.

3. Runoff from the active portion of the landfill must be handled in accordance with section 66 of this regulation.

4. As used in this section, "active portion" means that part of a municipal solid waste landfill unit which has received or is receiving wastes and which has not been closed in accordance with sections 69, 70 and 71 of this regulation.

Sec. 66. The owner or operator of a Class I site shall not:

1. Cause a discharge of pollutants or contaminants from a municipal solid waste landfill unit into the waters of the state or waters of the United States, including wetlands, which violates any requirements of the federal Clean Water Act of 1977, including, but not limited to, the National Pollutant Discharge Elimination System (33 U.S.C. § 1342), as that section existed on the effective date of this regulation, or NRS 445.131 to 445.354, inclusive, and the regulations adopted pursuant thereto; or

2. Cause the discharge of a nonpoint source of pollution into the waters of the state or waters of the United States, including wetlands, which violates any requirement of a plan for the management of the quality of water that is applicable in the area or throughout the state and which has been approved pursuant to sections 208 or 319 of the Clean Water Act of 1977, (33 U.S.C. §§ 1288 or 1329), as those sections existed on the effective date of this regulation, or NRS 445.131 to 445.354, inclusive, and the regulations adopted pursuant thereto.

Sec. 67. 1. The owner or operator of a Class I site shall record and retain at the site in the operating records or at a location approved by the solid waste management authority, the following information as it becomes available:

(a) Any demonstration of restrictions on location required by NAC 444.678 and sections 35 to 40, inclusive, of this regulation;

(b) Records of inspection, training procedures and procedures for notification required by section 62 of this regulation;

(c) Results from the monitoring of gas and any remediation plans required by section 63 of this regulation;

(d) Any documentation relating to the design of the municipal solid waste landfill unit for the placement

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of leachate or gas condensate in the unit as required by paragraph (b) of subsection 2 of NAC 444.692;

(e) Any demonstration, certification, finding, monitoring, testing or analytical data from the program for monitoring ground water required by sections 43 to 61, inclusive, of this regulation;

(f) Plans for closure and postclosure and any monitoring, testing or analytical data required by sections 32, 34 and 69 to 72, inclusive, of this regulation; and

(g) Any documentation of cost estimate and financial assurance required by NAC 444.685.

2. The owner or operator shall notify the solid waste management authority when the documentation has been placed in or added to the operating records. All information contained in the operating records must be furnished upon request to the solid waste management authority or be made available at all reasonable times for inspection by the solid waste management authority.

3. The solid waste management authority may establish alternative schedules for recordkeeping and notification required by NAC 444.570 to 444.748, inclusive, and sections 2 to 87, inclusive, of this regulation, except for the notification required by subsection 3 of section 35 of this regulation and by subsection 3 of section 53 of this regulation.

Sec. 68. *An owner or operator shall prevent or control populations of disease vectors at the municipal solid waste landfill unit using techniques appropriate for the protection of public health and safety and the environment. Other than daily cover, appropriate techniques must be instituted whenever required by the solid waste management authority to minimize the transmission of disease.*

Sec. 69. 1. *The owner or operator of a Class I site shall install a system for a final cover which is designed to minimize infiltration and erosion. Except as otherwise provided in subsection 2, the system must be designed and constructed to:*

(a) Have a permeability that is less than or equal to the permeability of any system for a bottom liner or natural subsoils present, or have a permeability no greater than 1×10^{-5} centimeters per second, whichever is less;

(b) Minimize infiltration through the closed municipal solid waste landfill unit by the use of an infiltration layer which contains at least 18 inches of earthen material; and

(c) Minimize erosion of the final cover by the use of an erosion layer which contains at least 6 inches of earthen material which is capable of sustaining the growth of native plants.

2. The solid waste management authority may approve an alternative design for a final cover which includes:

(a) An infiltration layer which achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraphs (a) and (b) of subsection 1; and

(b) An erosion layer which provides equivalent protection from wind and water erosion as the erosion layer specified in paragraph (c) of subsection 1.

3. The final cover must be graded to drain surface water from the cover. The top slope must have a grade of not less than 3 percent. The design of the final cover must be sufficient to control erosion and maintain the stability of the slope.

Sec. 70. 1. *At least 15 days before beginning the closure of a municipal solid waste landfill unit at a Class I site pursuant to subsection 2, an owner or operator shall provide notice to the solid waste management authority of the intent to close the unit.*

2. The owner or operator shall begin activities for the closure of the municipal solid waste landfill unit no later than 30 days after the date on which the unit receives the

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final receipt of wastes or, if the unit has remaining capacity and there is a reasonable likelihood that the unit will receive additional wastes, no later than 1 year after the most recent receipt of wastes. Extensions beyond the 1-year deadline may be granted by the solid waste management authority if the owner or operator demonstrates that the unit has the capacity to receive additional wastes and the owner or operator has taken and will continue to take all actions necessary to prevent threats to public health and safety and the environment from the open unit.

3. The owner or operator of a Class I site shall complete activities for the closure of each municipal solid waste landfill unit at the site in accordance with the plan for closure within 180 days after the beginning the closure. Extensions of the period for closure may be granted by the solid waste management authority if the owner or operator demonstrates that closure will, of necessity, take longer than 180 days and that the owner or operator has taken and will continue to take all actions to prevent threats to public health and safety and the environment from the open unit.

4. After the closure of each municipal solid waste landfill unit, the owner or operator of the site shall notify the solid waste management authority that a certification, signed by an independent registered professional engineer and approved by the solid waste management authority verifying that closure has been completed in accordance with the plan for closure, has been placed in the operating record of the site.

Sec. 71. 1. After the closure of all municipal solid waste landfill units within a Class I site, the owner or operator of the site shall:

(a) Record a notation that complies with the requirements of subsection 2 on the deed to the property on which the site is located or on any other instrument which is normally examined during a title search; and

(b) Notify the solid waste management authority that the notation has been recorded and a copy of the notation has been placed in the operating records of the site.

2. The notation on the deed or other instrument must in perpetuity notify any potential purchaser of the property that:

(a) The land has been used as a landfill; and

(b) Its use is restricted in accordance with section 34 of this regulation.

3. The owner or operator may request permission from the solid waste management authority to remove the notation from the deed or other instrument if all wastes are removed from the site.

Sec. 72. 1. After the closure of each municipal solid waste landfill unit of a Class I site, the owner or operator of the site shall conduct a program for postclosure for that unit. Except as otherwise provided in subsection 2, the program must be conducted for 30 years and consist of at least the following:

(a) The integrity and effectiveness of any final cover must be maintained, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion or other events, and preventing run on and runoff from eroding or otherwise damaging the final cover.

(b) The system to collect leachate must be maintained and operated in accordance with the requirements in section 42 of this regulation, if applicable. The solid waste management authority may allow the owner or operator to stop managing leachate if the owner or operator demonstrates that leachate no longer poses a threat to public health and safety and the environment.

(c) The ground water must be monitored in accordance with sections 43 to 61, inclusive, of this regulation and the system for monitoring the ground water must be maintained, if applicable.

(d) The system for monitoring gas must be maintained and operated in accordance with section 63 of this regulation.

2. The length of the program for postclosure may be:

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- (a) Decreased by the solid waste management authority if the owner or operator demonstrates that the reduced period is sufficient to protect public health and safety and the environment and this demonstration is approved by the solid waste management authority; or*
- (b) Increased by the solid waste management authority if it determines that the lengthened period is necessary to protect public health and safety and the environment.*

3. After the completion of program for postclosure for each municipal solid waste landfill unit at a Class I site, the owner or operator shall notify the solid waste management authority that a certification, signed by an independent registered professional engineer and approved by the solid waste management authority verifying that the program has been completed in accordance with the plan for postclosure, has been placed in the operating record.

Sec. 73. 1. *The owner or operator shall obtain a detailed written estimate, in current dollars, of the cost of hiring a third person to close the largest area of all municipal solid waste landfill units within the site requiring a final cover as required by section 69 of this regulation at any time during the active life of the unit, in accordance with the plan for closure. The owner or operator shall notify the solid waste management authority that the estimate has been placed in the operating records of the disposal site.*

2. The estimate must equal the cost of closing the largest area of all municipal solid waste landfill units within the site requiring a final cover at any time during the active life of the unit when the extent and manner of its operation would make closure the most expensive, as indicated by the plan for closure.

3. During the active life of the municipal solid waste landfill unit, the owner or operator shall annually adjust the estimate for inflation.

4. The owner or operator shall increase the estimate and amount of financial assurance if changes to the plan for closure or conditions at the municipal solid waste landfill unit increase the maximum cost of closure at any time during the remaining active life of the unit.

5. The owner or operator may reduce the estimate and amount of financial assurance if the estimate exceeds the maximum cost of closure at any time during the remaining life of the municipal solid waste landfill unit. The owner or operator shall notify the solid waste management authority that the justification for the reduction has been placed in the operating records of the site.

6. The owner or operator of each municipal solid waste landfill unit shall establish financial assurance for closure of the municipal solid waste landfill unit in compliance with sections 76 to 84, inclusive, of this regulation. The owner or operator shall provide continuous coverage for closure until released by the solid waste management authority from the requirements for financial assurance by demonstrating compliance with section 71 of this regulation.

Sec. 74. 1. *The owner or operator shall obtain a detailed written estimate, in current dollars, of the cost of hiring a third person to conduct a program for postclosure for each of the municipal solid waste landfill units within the site in compliance with the plan for postclosure developed pursuant to section 72 of this regulation. The estimate for postclosure used to demonstrate financial assurance pursuant to subsection 6 must account for the total costs of conducting the program for postclosure, including annual and periodic costs as described in the plan for postclosure over the entire period for postclosure. The owner or operator shall notify the solid waste management authority that the estimate has been placed in the operating records of the unit.*

2. The estimate for postclosure must be based on the most expensive costs of postclosure during the period for postclosure.

3. During the active life of the municipal solid waste landfill unit and the period for postclosure, the owner or

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operator shall annually adjust the estimate for postclosure for inflation.

4. The owner or operator shall increase the estimate for postclosure and amount of financial assurance if changes in the plan for postclosure or the conditions of the municipal solid waste landfill unit increase the maximum costs of postclosure.

5. The owner or operator may reduce the estimate for postclosure and amount of financial assurance if the estimate exceeds the maximum costs of postclosure remaining over the period for postclosure. The owner or operator shall notify the solid waste management authority that the justification for the reduction has been placed in the operating records of the unit.

6. The owner or operator of each municipal solid waste landfill unit shall establish, in accordance with sections 76 to 84, inclusive, of this regulation, financial assurance for the costs of postclosure as required by section 72 of this regulation. The owner or operator shall provide continuous coverage for postclosure until released by the solid waste management authority from the requirements of financial assurance for postclosure by demonstrating compliance with subsection 3 of section 72 of this regulation.

Sec. 75. 1. An owner or operator of a municipal solid waste landfill unit required to undertake a plan for corrective action pursuant to sections 59, 60 and 61 of this regulation shall obtain a detailed written estimate, in current dollars, of the cost of hiring a third person to perform the corrective action in accordance with that plan. The estimate of the corrective action must account for the total cost of activities for corrective action as described in the plan for corrective action for the period of the plan. The owner or operator shall notify the solid waste management authority that the estimate has been placed in the operating records of the unit.

2. The owner or operator shall annually adjust the estimate for inflation until the plan for corrective action is completed in accordance with sections 59, 60 and 61 of this regulation.

3. The owner or operator shall increase the estimate for corrective action and amount of financial assurance if changes in the plan for corrective action or conditions at the municipal solid waste landfill unit increase the maximum costs of the corrective action.

4. The owner or operator may reduce the amount of the estimate for corrective action and amount of financial assurance if the estimate exceeds the maximum remaining costs of the corrective action. The owner or operator shall notify the solid waste management authority that the justification for the reduction has been placed in the operating records of the unit.

5. The owner or operator of each municipal solid waste landfill unit required to undertake a plan for corrective action pursuant to sections 59, 60 and 61 of this regulation, shall establish, in accordance with sections 76 to 84, inclusive, of this regulation, financial assurance for the most recent plan for corrective action. The owner or operator shall provide continuous coverage for corrective action until released by the solid waste management authority from the requirements of financial assurance for corrective action by demonstrating compliance with section 61 of this regulation.

Sec. 76. The mechanisms used to demonstrate financial assurance pursuant to NAC 444.685 must ensure that the money necessary to meet the cost of closure, postclosure and corrective action for known releases of contaminants will be available whenever it is needed. The financial assurance may be in the form of:

- 1. A trust fund as described in section 77 of this regulation;*
- 2. A surety bond guaranteeing payment or performance as described in section 78 of this regulation;*
- 3. A letter of credit as described in section 79 of this regulation;*
- 4. A policy of insurance as described in section 80 of this regulation;*

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5. *A mechanism approved by the solid waste management authority pursuant to section 81 of this regulation;*
6. *An assumption of responsibility by the state as described in section 82 of this regulation; or*
7. *Any combination of the options listed in subsections 1 to 6, inclusive.*

Sec. 77. 1. *An owner or operator may satisfy the requirements of NAC 444.685 by establishing a trust fund which conforms to the requirements of this section. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency. A copy of the trust agreement must be placed in the operating records of the disposal site.*

2. *The owner or operator shall annually make payments into the trust fund over the term of the period for payment into the fund.*

3. *If a trust fund is used to demonstrate financial assurance for closure and postclosure, the first payment into the fund must be at least equal to the current estimate of the cost for closure or postclosure, except as otherwise provided in section 82 of this regulation, divided by the number of years of the period for payment into the fund. The amount of subsequent payments must be determined by the following formula:*

$$\text{Next Payment} = \frac{\text{CE}-\text{CV}}{Y}$$

where:

CE is the current estimate for closure or postclosure, as adjusted for inflation or other changes.

CV is the current value of the trust fund.

Y is the number of years remaining in the period for payment into the fund.

4. *If a trust fund is used to demonstrate financial assurance for corrective action, the first payment into the trust fund must be at least equal to one-half of the current estimate of the cost for corrective action, except as otherwise provided in section 82 of this regulation, divided by the number of years in the period for payment into the fund. The amount of subsequent payments must be determined by the following formula:*

$$\text{Next Payment} = \frac{\text{RB}-\text{CV}}{Y}$$

where:

RB is the most recent estimate of the required balance in the trust fund needed for corrective action.

CV is the current value of the trust fund.

Y is the number of years remaining in the period for payment into the trust fund.

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5. The owner or operator shall:

(a) For a trust fund for closure and postclosure, obtain and make the initial payment into the trust fund before the effective date of this regulation or the initial receipt of solid waste, whichever is later.

(b) For a trust fund for corrective action, obtain the trust fund and make the initial payment into the trust fund no later than 120 days after the remedy for corrective action has been selected in accordance with the requirements of sections 59, 60 and 61 of this regulation.

(c) Maintain the trust fund until he is no longer required to demonstrate financial responsibility pursuant to sections 73, 74 and 75 of this regulation.

6. If the owner or operator establishes a trust fund after having used one or more alternate mechanisms specified in section 76 of this regulation, the first payment into the trust fund must be at least equal to the amount which the fund would have contained if the trust fund were established initially and annual payments made pursuant to this section.

7. The owner, operator or any other person authorized to conduct activities for closure, postclosure or corrective action may request reimbursement from the trustee for related expenditures. Requests for reimbursement may be granted by the trustee only if sufficient money is remaining in the trust fund to cover the remaining costs of closure, postclosure or corrective action, and if justification and documentation of the cost is placed in the operating records of the disposal site. The owner or operator shall notify the solid waste management authority that the documentation of the justification for reimbursement has been placed in the operating records and that reimbursement has been received.

8. The owner or operator may terminate the trust fund only if he substitutes alternate financial assurance as specified in this section or is no longer required to demonstrate financial responsibility in accordance with the requirements of section 73, 74 or 75 of this regulation.

9. As used in this section, "period for payment into the fund" means:

(a) In the case of a trust fund for closure or postclosure, the remaining life of the municipal solid waste landfill unit.

(b) In the case of a trust fund for corrective action, more than one-half of the estimated length of the program for corrective action.

Sec. 78. 1. An owner or operator may demonstrate financial assurance for closure or postclosure by obtaining a surety bond guaranteeing payment or performance which conforms to the requirements of this section. An owner or operator may demonstrate financial assurance for corrective action by obtaining a surety bond guaranteeing performance which conforms to the requirements of this section.

2. A bond must:

(a) If for closure and postclosure, be obtained by the owner or operator and become effective before the effective date of this regulation or the initial receipt of waste, whichever is later.

(b) If for corrective action, be obtained by the owner or operator and become effective no later than 120 days after the remedy for corrective action has been selected in accordance with the requirements of sections 59, 60, and 61 of this regulation.

(c) Be maintained until the owner or operator is no longer required to demonstrate financial responsibility pursuant to sections 73, 74 and 75 of this regulation.

3. The owner or operator shall notify the solid waste management authority that a copy of the bond has been placed in the operating records of the disposal site.

4. The surety company issuing the bond must be among those listed as an acceptable surety on federal bonds

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in Circular 570 of the U.S. Department of the Treasury which is published each July in the Federal Register.

5. Except as otherwise provided in section 83 of this regulation, the sum of the bond must be in an amount at least equal to the current estimate for closure, postclosure or corrective action, whichever is applicable.

6. The surety must become liable on the bond if the owner or operator fails to make payments or perform as guaranteed by the bond.

7. In addition to obtaining the surety bond, the owner or operator shall establish a trust fund. The trust fund must meet the requirements of section 77 of this regulation, except the requirements for initial payment and subsequent annual payments specified in that section.

8. The surety shall deposit payments made under the terms of the bond directly into the trust fund. Payments from the trust fund must be approved by the trustee.

9. The terms of the bond must authorize the surety to cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the solid waste management authority at least 120 days before cancellation. If the surety cancels the bond, the owner or operator shall obtain alternate financial assurance as specified in sections 76 to 84, inclusive, of this regulation.

10. The owner or operator may cancel the bond only if alternate financial assurance is substituted as specified in sections 76 to 84, inclusive, of this regulation or the owner or operator is no longer required to demonstrate financial responsibility in accordance with section 73, 74 or 75 of this regulation.

Sec. 79. 1. An owner or operator may satisfy the requirements of NAC 444.685 by obtaining an irrevocable letter of credit which conforms to the requirements of this section.

2. A letter of credit must:

(a) If for closure and postclosure, be obtained by the owner or operator and become effective before the effective date of this regulation or the initial receipt of waste, whichever is later.

(b) If for corrective action, be obtained by the owner or operator and become effective no later than 120 days after the remedy for corrective action has been selected in accordance with the requirements of sections 59, 60 and 61 of this regulation.

(c) Be maintained until the owner or operator is no longer required to demonstrate financial responsibility pursuant to sections 73, 74 and 75 of this regulation.

3. The owner or operator shall notify the solid waste management authority that a copy of the letter of credit has been placed in the operating records of the disposal site.

4. The issuing institution must be an entity which has the authority to issue letters of credit and whose operations are regulated and examined by a federal or state agency.

5. A letter from the owner or operator must be filed with the letter of credit in the operating records that includes:

(a) A reference to the letter of credit by number;

(b) The issuing institution;

(c) The date of issuance;

(d) The name of the owner or operator;

(e) The address of the disposal site; and

(f) The amount of money assured.

6. Except as otherwise provided in this section, the letter of credit must be irrevocable and issued for a period of at least 1 year in an amount at least equal to the current estimate for closure, postclosure or corrective action, whichever is applicable. The letter of credit must provide that the expiration date will be automatically extended

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for a period of at least 1 year unless the issuing institution has canceled the letter of credit.

7. The terms of the letter of credit must authorize the issuing institution to cancel the letter of credit by sending notice of cancellation by certified mail to the owner or operator and to the solid waste management authority at least 120 days before the cancellation. If the letter of credit is canceled by the issuing institution, the owner or operator shall obtain alternate financial assurance.

8. The owner or operator may cancel the letter of credit only if alternate financial assurance is substituted as specified in this sections 76 to 84, inclusive, of this regulation or the owner or operator is released from the requirements of this section in accordance with section 73, 74 or 75 of this regulation.

Sec. 80. 1. *An owner or operator may demonstrate financial assurance for closure and postclosure by obtaining insurance which conforms to the requirements of this section.*

2. The insurance must:

(a) Be obtained by the owner or operator and become effective before the effective date of this regulation or the initial receipt of waste, whichever is later; and

(b) Be maintained until the owner or operator is no longer required to demonstrate financial responsibility pursuant to sections 73, 74 and 75 of this regulation.

3. The insurer must be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in this for any other state.

4. The owner or operator shall notify the solid waste management authority that a copy of the policy of insurance has been placed in the operating records of the disposal site.

5. The policy of insurance must guarantee that money will be available to close the municipal solid waste landfill unit whenever final closure occurs or to carry out a program for postclosure whenever the period of postclosure begins, whichever is applicable. The policy must also guarantee that once closure or postclosure begins, the insurer is responsible for paying money to the owner, operator or any other person authorized to conduct the closure or postclosure, up to an amount equal to the face amount of the policy.

6. Except as otherwise provided in section 77 of this regulation, the policy of insurance must be issued for a face amount at least equal to the current estimate for closure or postclosure, whichever is applicable. Actual payments by the insurer must not change the face amount, although the insurer's future liability may be lowered by the amount of the payments.

7. An owner, operator or any other person authorized to conduct the closure or postclosure may receive reimbursements for related expenditures. Requests for reimbursement may be granted by the insurer only if the remaining value of the policy is sufficient to cover the remaining costs of the closure or postclosure, and if justification and documentation of the cost is placed in the operating records of the disposal site. The owner or operator shall notify the solid waste management authority that documentation of the justification for reimbursement has been placed in the operating records and that reimbursement has been received.

8. Each policy of insurance must contain a provision allowing the assignment of the policy to a successor owner or operator. The assignment may be conditional upon the consent of the insurer, if the consent is not unreasonably refused.

9. The policy of insurance must provide that the insurer may not cancel, terminate or fail to renew the policy except for a failure to pay the premium. An automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may cancel the policy by sending notice of cancellation by certified mail to the owner, operator and solid waste management authority at least 120 days before the cancellation. If the insurer cancels the policy, the owner or operator shall obtain alternate financial assurance as specified in sections 76 to 84, inclusive, of this regulation.

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10. If a policy of insurance provides coverage for postclosure, the insurer shall, commencing on the date that liability to make payments pursuant to the policy accrues, annually increase the face amount of the policy. The increase must be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equal to 85 percent of the most recent rate of interest for or 85 percent of the equivalent yield announced by the United States Treasury for 26-week treasury bills.

11. The owner or operator may cancel the policy of insurance only if he substitutes alternate financial assurance in accordance with sections 76 to 84, inclusive, of this regulation or he is no longer required to demonstrate financial responsibility in accordance with the requirements of sections 73, 74 and 75 of this regulation.

12. As used in this section, "face amount" means the total amount the insurer is obligated to pay under the policy.

Sec. 81. 1. An owner or operator may satisfy the requirements of NAC 444.685 by obtaining any other mechanism which:

(a) Meets the criteria specified in section 84 of this regulation; and

(b) Is approved by the solid waste management authority.

2. A mechanism obtained pursuant to this section must be obtained by the owner or operator:

(a) For closure and postclosure, by the effective date of this regulation or before the initial receipt of waste, whichever is later.

(b) For corrective action, no later than 120 days after the remedy for corrective action has been selected in accordance with the requirements of sections 59, 60, and 61 of this regulation.

(c) Maintained until the owner or operator is no longer required to demonstrate financial responsibility pursuant to sections 73, 74 and 75 of this regulation.

Sec. 82. If this state assumes legal responsibility for an owner's or operator's compliance with the requirements for closure, postclosure or corrective action set forth in NAC 444.570 to 444.748, inclusive, and sections 2 to 87, inclusive, of this regulation, or assures that money will be available from the state to cover the related expenses, the owner or operator shall be deemed to be in compliance with the requirements of NAC 444.685. Any assumption of responsibility by this state must meet the criteria specified in section 84 of this regulation.

Sec. 83. 1. Except as otherwise provided in subsection 2, an owner or operator may satisfy the requirements of NAC 444.685 by establishing more than one mechanism for financial assurance per municipal solid waste landfill unit as specified in sections 77 to 82, inclusive, of this regulation. The combination of mechanisms, rather than a single mechanism, must provide financial assurance for an amount at least equal to the current estimate of cost for closure, postclosure or corrective action, whichever is applicable.

2. Any financial assurance provided by:

(a) A corporate parent, if the entity holding the financial mechanism is a subsidiary of the corporate parent or a subsidiary of a subsidiary of the corporate parent; or

(b) Another subsidiary of the corporate parent, if the entity holding the financial mechanism is a subsidiary of the same corporate parent, may not be combined if the financial statements of the two entities are consolidated.

Sec. 84. 1. An entity providing the mechanism used to demonstrate financial assurance pursuant to NAC

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444.685 shall reimburse or make payments to the owner, operator or any other person designated by the solid waste management authority, from that mechanism, for expenses in such amounts as the solid waste management authority shall direct in writing.

2. Any such mechanism must:

(a) Ensure that the amount of money assured is sufficient to cover the costs of closure, postclosure or corrective action for known releases of contaminants, when needed;

(b) Ensure that money will be available in a timely fashion, when needed; and

(c) Be legally valid, binding and enforceable under applicable state and federal law.

Sec. 85. The owner or operator of a Class II site shall provide suitable shelter, drinking water and sanitary facilities for the employees who work at the site.

Sec. 86. The owner and operator of a Class II site shall install, by October 9, 1996, a system for monitoring the ground water which complies with section 45 of this regulation. The solid waste management authority shall determine the parameters and the frequency of sampling ground water to be used in monitoring the ground water.

Sec. 87. The owner or operator of a Class III site shall comply with NAC 444.686 and 444.688 and sections 62 to 68, inclusive, and 73 to 84, inclusive, of this regulation.

Sec. 88. NAC 444.570 is hereby amended to read as follows:

As used in NAC 444.570 to 444.748, inclusive, *and sections 2 to 87, inclusive, of this regulation*, unless the context otherwise requires, the words and terms defined in

NAC 444.5705 to 444.632, inclusive, *and sections 2 to 21, inclusive, of this regulation*, have the meanings ascribed to them in those sections.

Sec. 89. NAC 444.5705 is hereby amended to read as follows:

"Class I site" means a *disposal site which:*

1. Is comprised of at least one municipal solid waste landfill unit [which accepts 20 tons or more per day on average of solid waste.] including all contiguous land and structures, other appurtenances and improvements on the land used for the disposal of solid waste; and

2. Is not a Class II or Class III site.

Sec. 90. NAC 444.571 is hereby amended to read as follows:

"Class II site" means a *disposal site:*

1. Which is comprised of at least one municipal solid waste landfill unit [which] ;

2. Which accepts less than 20 tons of solid waste per day on an annual average [of solid waste.] ;

3. For which there is no evidence of contamination of ground water originating from the site;

4. Which serves a community that has no other practicable alternatives for waste management; and

5. Which is located in an area which annually receives no more than 25 inches of precipitation. The term includes all contiguous land and structures, other appurtenances and improvements on the land used for the disposal of solid waste.

Sec. 91. NAC 444.5715 is hereby amended to read as follows:

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"Class III site" means a **[land]** disposal site which accepts only industrial *solid* waste.

Sec. 92. NAC 444.585 is hereby amended to read as follows:

1. "Industrial *solid* waste" *means solid waste derived from industrial or manufacturing processes, including but not limited to [has the meaning ascribed to it in 40 C.F.R. Part 258.2.] [includes, without limitation,] the solid waste generated by the:*

- (a) Generation of electric power;*
- (b) Manufacture of fertilizer and agricultural chemicals;*
- (c) Manufacture of food and its related products and by-products;*
- (d) Manufacture of inorganic chemicals;*
- (e) Manufacture of leather and products made from leather;*
- (f) Manufacture of nonferrous metals, including the foundries which manufacture those metals;*
- (g) Manufacture of organic chemicals;*
- (h) Manufacture of plastics, resins and other miscellaneous products made from plastic;*
- (i) Pulp and paper industry;*
- (j) Manufacture of rubber and other miscellaneous products made from rubber;*
- (k) Manufacture of products made from stone, glass, clay and concrete;*
- (l) Manufacture of textiles;*
- (m) Manufacture of transportation equipment; and*
- (n) Treatment of water.*
- (o) Manufacturing of iron and steel; and*
- (p) Construction, refurbishing, or demolition of buildings or other structures.*

2. *The term does not include waste generated by the mining, oil and gas industries.*

Sec. 93. NAC 444.588 is hereby amended to read as follows:

"Lift" means a compacted layer of solid waste **[plus its overlying cover material.]**, typically consisting of several cells, which is approximately 10 to 15 feet thick, placed within a defined area of a municipal solid waste landfill unit and separated from other lifts on the top and bottom by a layer of cover material.

Sec. 94. NAC 444.591 is hereby amended to read as follows:

"Municipal solid waste landfill unit" **[has the meaning ascribed to it in 40 C.F.R. Part 258.2.]** *means a discrete area of land or an excavation for the disposal of household waste. The term does not include an injection well, a surface impoundment, a land application unit or a waste pile, as those terms are defined in 40 C.F.R. § 257.2. In addition to household waste, a municipal solid waste landfill unit may receive other types of solid waste, including sludge and industrial solid waste. A municipal solid waste landfill may be publicly or privately owned.*

Sec. 95. NAC 444.596 is hereby amended to read as follows:

"Open burning" means **[any fire from which the products of combustion are emitted directly into the atmosphere without passing through an approved control device.]** *the combustion of solid waste without:*

- 1. The control of air to maintain an adequate temperature for efficient combustion;*
- 2. The containment of the reaction in an enclosed device to provide sufficient residence time and mixing for a complete combustion; and*
- 3. The control of the emission of the products resulting from the combustion.*

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Sec. 96. NAC 444.598 is hereby amended to read as follows:

"Open dump" means **[a land] *an uncontrolled*** disposal site **[without effective control,]** where solid waste is disposed of in **[an improper and unsanitary manner.] *a manner which does not comply with NRS 444.630 or a permit issued pursuant to NAC 444.570 to 444.748, inclusive, and sections 2 to 87, inclusive, of this regulation.***

Sec. 97. NAC 444.604 is hereby amended to read as follows:

"Person" includes any state or federal agency **[.]**, ***any state, including the State of Nevada, a political subdivision of any state, including the State of Nevada, and an interstate agency or organization.***

Sec. 98. NAC 444.610 is hereby amended to read as follows:

1. "Refuse" means **[all putrescible and nonputrescible solid wastes, including garbage, rubbish, street cleanings, dead animals, yard clippings and market and industrial wastes.] *any:***

(a) *Garbage.*

(b) *Sludge from a:*

(1) *Plant that treats waste water.*

(2) *Plant that treats the water supply.*

(3) *Facility for controlling air pollution.*

(c) *Any other discarded material, including solid, semi- solid, liquid or contained gaseous material, resulting from industrial or commercial operations or community activities.*

2. ***The term does not include:***

(a) *Any discarded material, including solid, semi-solid, liquid or contained gaseous material, resulting from mining or agricultural activities which is excluded from a plan for a system for the management of solid waste pursuant to NRS 444.620.*

(b) *Solid or dissolved materials in domestic sewage.*

(c) *Industrial discharges that are point sources subject to NRS 445.221.*

(d) *Source material, special nuclear material or by-product material, as those terms are defined by the Atomic Act of 1954, as that act existed on the effective date of this regulation.*

Sec. 99. NAC 444.622 is hereby amended to read as follows:

"Solid waste" **[means all putrescible and nonputrescible refuse in solid or semisolid form, including, but not limited to, garbage, rubbish, junk vehicles, ashes or incinerator residue, street refuse, dead animals, demolition waste, construction waste, solid or semisolid commercial and industrial waste and hazardous waste, including explosives, pathological waste, chemical waste and herbicide or pesticide waste.] *has the meaning ascribed to it in NRS 444.490.***

Sec. 100. NAC 444.624 is hereby amended to read as follows:

"Solid waste management authority" **[means the officers and agents of the division of environmental protection, any district board of health created pursuant to NRS 439.370 or any other entity given specific authority by the division.] *has the meaning ascribed to it in section 3 of Senate Bill No. 97 of 1993.***

Sec. 101. NAC 444.634 is hereby amended to read as follows:

If any of the provisions of NAC 444.570 to 444.748, inclusive, ***and sections 2 to 87, inclusive, of this regulation,*** or any application thereof to any person, thing or circumstance is held invalid, it is intended that such invalidity not affect the remaining provisions, or their

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application, that can be given effect without the invalid provision or application.

Sec. 102. NAC 444.636 is hereby amended to read as follows:

1. The following provisions are hereby adopted by reference [as those provisions existed on July 1, 1992:
 - (a) 40 C.F.R. Part 258.10 to 258.16, inclusive;
 - (b) 40 C.F.R. Part 258.2, for the terms "industrial waste," "lateral expansion" and "municipal solid waste landfill unit" only;
 - (c) 40 C.F.R. Parts 258.20 to 258.29, inclusive;
 - (d) 40 C.F.R. Parts 258.50 to 258.58, inclusive;
 - (e) 40 C.F.R. Parts 258.60 and 258.61; and
 - (f) 40 C.F.R. Parts 258.70 to 258.74, inclusive.] :
 - (a) *Appendix I to 40 C.F.R Part 258, as that appendix existed on the effective date of this regulation;*
 - (b) *Appendix II to 40 C.F.R. Part 258, as that appendix existed on the effective date of this regulation;*
 - (c) *The provisions of 40 C.F.R. Part 257.2, as that part existed on October 9, 1993, for the limited purposes of defining "municipal solid waste landfill unit" in NAC 444.591;*
 - (d) *The United States Geological Survey, Open File Report 82-1033, "Probabilistic Estimates of Maximum Acceleration and Velocity in Rock in the Contiguous United States," for the limited purpose of defining "seismic impact zone" in section 39 of this regulation; and*
 - (e) *"Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", Environmental Protection Agency, Publication No. SW-846, for the limited purposes of defining "liquid waste" in NAC 444.692.*
2. Volume 40 C.F.R. Parts 190 to 259, inclusive, may be obtained from the Superintendent of Documents, United States Government Printing Office, Washington, D.C. 20402, for the price of \$13.
3. [Any reference to "state director" or "director of an approved state" in 40 C.F.R. Part 258 shall be deemed to mean the administrator of the division.] *The report of the United States Geological Survey may be obtained from the United States Geological Survey, Books and Open Files Reports Section, Federal Center, Building 810, Box 25425, Denver, Colorado 80225, at a cost of \$24.50.*

Sec. 103. NAC 444.638 is hereby amended to read as follows:

1. [Nothing contained in the] *The provisions of NAC 444.570 to 444.748, inclusive, and sections 2 to 87, inclusive, of this regulation, may not be interpreted to circumvent any of those provisions to make them less effective.*
2. If more than one interpretation exists for a provision, the more restrictive interpretation applies.

Sec. 104. NAC 444.640 is hereby amended to read as follows:

1. [No person or municipality may operate a solid waste disposal facility utilizing open burning as a means of disposal except as permitted by NAC 445.753 or by a variance granted by the state environmental commission.
2. Nothing in these regulations may be construed to] *Open burning of solid wastes at a disposal site, transfer station or other facility which handles solid waste is prohibited.*
2. *The provisions of NAC 444.570 to 444.748, inclusive, and sections 2 to 87, inclusive, of this regulation, do not prevent the disposal of animal carcasses by burning if such burning is done in accordance with NAC 445.753, except that such burning is not allowed at [land disposal sites] municipal solid waste landfill units and Class III sites covered by [these regulations.] those provisions.*

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Sec. 105. NAC 444.646 is hereby amended to read as follows:

1. Sewage sludges, septic tank pumpings [, **hospital wastes and other materials which may be hazardous**] **and medical wastes** may be deposited at a [land] disposal site only if provisions for such disposal are included in the operational plan and approved by the solid waste management authority.
2. **[Liquid wastes must be processed in a manner so that the waste will be neutralized or solidified.**
- 3.] A completed special waste burial area must be covered with a layer of suitable cover material compacted to a minimum uniform depth of 36 inches.

Sec. 106. NAC 444.654 is hereby amended to read as follows:

1. Septic tank pumpings and raw sewage must not be disposed of by land spreading, unless it is specifically determined and approved in writing by the solid waste management authority that such disposal can be conducted with assured, adequate protection of public health and safety and the environment.
2. ***The disposal of raw sewage and the septic tank pumpings at a municipal solid waste landfill unit or a Class III site are prohibited.***

Sec. 107. NAC 444.658 is hereby amended to read as follows:

1. Every municipality or district board of health must develop a plan for the management of solid waste within the area of its jurisdiction, together with a program for carrying out the plan.
2. The area or region to be included in such [plans] **plan** is the area within the boundaries of each county in the state, except in those instances where an incorporated city develops and carries out a separate plan. This section does not prevent several municipalities from developing a single combined plan.
3. Such plans must be comprehensive in scope so as to provide for all parts of a complete solid waste management system.
4. In those areas where **plans for a** solid waste management system [plans] have already been developed and approved, plans must be updated as necessary to conform with NAC 444.570 to 444.748, inclusive, **and sections 2 to 87, inclusive, of this regulation**, and submitted to the division. **[Such updating and resubmittal] The updated plan** may be **in the form of a** letter or summary [form] if all necessary items are included.
5. The schedule for carrying out the plan must state the times for putting each part of the plan into effect.
6. All municipalities and district boards of health must submit their respective **plans for a** solid waste management system [plans] on or before October 1, 1994.
7. Every plan must be reviewed and updated as necessary, but not less often than once every 5 years following October 1, 1994.
8. Every plan must be submitted to the division for its approval. The plan may not be carried out unless it has been approved by the division.

Sec. 108. NAC 444.660 is hereby amended to read as follows:

1. The storage on **the** premises, the collection and **the** transportation to the disposal site of solid waste must generally be according to the pertinent ordinances or regulations of the city, town or county wherein [such] **those** services are performed.
2. **[Nothing in] The provisions of** NAC 444.570 to 444.748, inclusive, [abridges] **and sections 2 to 87, inclusive, of this regulation, do not abridge** the authority of a town, city or county to establish, by ordinance or otherwise, higher standards than those contained in those sections.

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3. No **[solid waste] system for the** storage, collection or transportation **[system] of solid waste** may be allowed to cause health hazards, public nuisances or otherwise cause or contribute to the impairment of the environment.

Sec. 109. NAC 444.662 is hereby amended to read as follows:

1. The owner or occupant, or both, of any premises, business establishment or industry are responsible for the sale and sanitary storage of all solid waste accumulated at the premise until it is removed.

2. All garbage and similar putrescible waste must be stored in:

(a) Durable, **[corrosion-resistant,]** nonabsorbent, watertight, **[rodent-resistant]** and easily cleanable containers with **[fly-tight covers.] that are resistant to corrosion and rodents. The covers of such containers must prevent the entry of flies.**

(b) Other types of containers acceptable to the solid waste management authority **[and]** which conform to the intent of NAC 444.660 to 444.666, inclusive.

3. The size and allowable weight of the container is determined by the collection agency, subject to the approval of the solid waste management authority.

4. **[Where] If** garbage and similar putrescible wastes are stored in combination with nonputrescible wastes, containers for the storage of the mixture must meet the requirements for garbage storage. ***These wastes must not be stored for more than 1 week before collection.***

5. **[Hazardous] Medical** wastes must be stored in watertight, **[corrosion-resistant,]** tightly covered, and clearly labeled containers ***that are resistant to corrosion and are*** in a safe location, inaccessible to the public. In addition, medical wastes must be stored in cleanable containers with liners approved by the solid waste management authority. Medical wastes must not be deposited in containers with other solid wastes. ***Medical wastes must be transported separately from other solid wastes to an approved disposal site and handled in accordance with a method approved by the solid waste management authority.***

6. Bulky wastes or other nonputrescible wastes unsuitable for storage containers must be stored in a ***[nuisance-free manner.] manner that does not cause a nuisance.***

Sec. 110. NAC 444.674 is hereby amended to read as follows:

1. A salvage yard must not be established until the **[site]** location, facilities and proposed method of operation have been approved by the solid waste management authority.

2. Salvage in a salvage yard must be stored in an orderly manner so as to prevent **[rodent harborage,] harboring rodents, any** public nuisance and accidents.

3. All nonsalvageable material must be stored and disposed of according to NAC 444.660 to 444.666, inclusive, and 444.678 to 444.728, inclusive **[, and sections 2 to 87, inclusive, of this regulation.** In no case may nonsalvageable items be stored for more than 1 week.

4. No garbage or similar putrescible material may be present at a salvage yard, except in approved containers for such materials.

Sec. 111. NAC 444.677 is hereby amended to read as follows:

[The owner or operator of a Class I site or a lateral expansion of a Class I site which is constructed or operated after September 2, 1992, must, before beginning construction or operation of the site, obtain the approval of the solid waste management authority. The application for approval] An application for a permit to operate a Class I site or a lateral expansion of a Class I site must be submitted to the solid waste management authority and must include:

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1. The name, location and mailing address of the:
 - (a) Site;
 - (b) Owner of the site;
 - (c) Operator of the site; and
 - (d) Authorized agent of the owner.
2. Proof of ownership of the land on which the site will be located.
3. The report *of the design of the site* required by NAC 444.680.
4. The **[environmental monitoring]** plan for *monitoring water* required by NAC 444.683.
5. The plan for operating the site required by NAC 444.684.
6. *A plan for closure required by section 32 of this regulation.*
7. *A plan for postclosure required by section 34 of this regulation.*
8. A copy of the financial assurance required by NAC 444.685.
9. *Any additional information which the solid waste management authority may require.*

Sec. 112. NAC 444.678 is hereby amended to read as follows:

The location of a Class I site must:

1. Be easily accessible in all kinds of weather to all vehicles expected to use it.
2. **[Safeguard against water pollution originating from the decomposed solid waste.**
3. **Safeguard against uncontrolled movement or collection of gas originating from the decomposed solid waste.]** *Prevent pollutants and contaminants from the municipal solid waste landfill units at the site from degrading the waters of the state.*
3. *Prevent uncontrolled migration of gas at the site.*
4. Have an adequate quantity of earth cover **[material]** that is workable **[,]** *and* compactible and **[which]** does not contain organic material of a quantity and distribution conducive to **[the]** harboring and breeding **[of]** disease vectors.
5. Conform with land use planning of the area.
6. Not be within one-fourth mile of the nearest inhabited dwelling or place of public gathering or be within 1,000 feet of a public highway, unless special provisions for **[site beautification, litter control and vector control]** *the beautification of the site and the control of litter and vectors* are included in the design and approved by the solid waste management authority.
7. Meet with the approval of the solid waste management authority.
8. Comply with the requirements set forth in **[40 C.F.R. Parts 258.10 to 258.16, inclusive.]** *sections 37 to 43, inclusive, of this regulation.*
9. Unless approved by the solid waste management authority, not be within 1,000 feet of any surface water or 100 feet of the uppermost aquifer if the site is approved after September 2, 1992.

Sec. 113. NAC 444.680 is hereby amended to read as follows:

The report of the design of a Class I site must:

1. Be signed by a professional engineer registered in this state.
2. Include **[preparation of]** a general location map showing land use and zoning within 1 mile of the disposal site.
3. Include **[preparation of a topographic map]** *plans and specifications* of the **[area]** *facility* which *are of sufficient detail to show compliance with the applicable design standards and provide a clear understanding of the*

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development of the site. The plan must:

- (a) Be at a scale of not more than 200 feet to the inch, including contour intervals of not more than 5 feet.
- (b) Show the *topography of the site before the development.*
- (c) *Show the proposed limits of excavation and fill areas [.*
- (c)] , including:

- (1) The final elevations and grades of each municipal solid waste landfill unit on the site;*
- (2) The system for final cover;*
- (3) The location and placement of each system of liners; and*
- (4) Each system for the collection and removal of leachate showing all critical grades and*

elevations of the inverts and drainage envelopes for the collection pipes, manholes, cleanouts, valves and sumps and showing the thicknesses of the drainage blankets.

- (d) Show any proposed soil borrow areas.

[(d)] (e) Show the sequence of development for the facility including an outline of fill areas, the sequence of filling operations and the locations of access roads.

- (f) Show access roads [.

- (e)] , *including dimensions, slopes, profiles and the types of pavement to be used.*

- (g) Show a typical cross section of [a lift.

- (f)] *the landfill.*

- (h) Show grades, *berms, dikes, swales and other devices* for proper drainage [of each lift.

- (g) Show special drainage and gas control devices, if required.

- (h)] *and control of surface water, run on and runoff for the site.*

- (i) *Show the devices for monitoring and controlling the gases at the site.*

(j) Show fencing, equipment shelter, employee facilities and all other [pertinent data to indicate clearly that the landfill will be developed, operated and completed in an orderly manner.] features for the development of the site.

- 4. Define the population and area to be served by the site.

- 5. Define the anticipated types, quantities and sources of solid wastes to be disposed of at the site.

- 6. Define the source, type and quantity of cover material.

7. Include proof of compliance with the requirements relating to the control of surface water set forth in [40 C.F.R. Parts 258.25 and 258.27.

8. Comply with the requirements of the design set forth in 40 C.F.R. Part 258.40(b) or demonstrate that another design is sufficient to protect the waters of the state from gradation by pollutants or contaminants. The demonstration must consider, without limitation:

- (a) The hydrogeologic characteristics of the site and the area surrounding the site;

- (b) The climatic factors of the area; and

- (c) The volume and physical and chemical characteristics of the anticipated leachate generation.]

sections 65 and 66 of this regulation.

- 8. *Contain documentation that the disposal site is in compliance with section 42 of this regulation, including:*

- (a) Appropriate charts and graphs;*

- (b) Soil borings, test pit logs and other relevant geologic information;*

- (c) Engineering calculations; and*

- (d) Other supporting data, including literature citations.*

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Sec. 114. NAC 444.683 is hereby amended to read as follows:

1. The [environmental monitoring] plan *for monitoring water* for a Class I site must provide [for] *a complete description of a system capable of monitoring the performance of the design of the site, including monitoring of the [unsaturated zone or ground water depending on local conditions.] ground water to detect the release of pollutants or contaminants from the municipal solid waste landfill unit into the waters of the state.*

2. The plan must:

(a) Identify the location and construction of monitoring points ; **[to be used to detect the migration of pollutants or contaminants from the site to waters of the state;]**

(b) Specify monitoring parameters and the frequency of monitoring those parameters;

(c) Specify procedures for quality assurance for all field and laboratory work;

(d) Provide for the semiannual submittal of monitoring data to the **[division;]** *solid waste management authority;*

(e) Establish procedures which must be used if monitoring provides evidence of leachate migration; and

(f) Comply with **[40 C.F.R. Parts 258.51 to 258.58, inclusive, if the plan includes the monitoring of ground water.] sections 42 to 61, inclusive, of this regulation.**

3. The **[division]** *solid waste management authority* may suspend monitoring requirements if the owner or operator of a Class I site demonstrates that there is no **[reasonable]** potential for migration of pollutants or contaminants from the site to waters of the **[state.]** *state during the active life of the site, including the period for closure and postclosure. The demonstration must be:*

(a) *Certified by a qualified ground water scientist and approved by the solid waste management authority; and*

(b) *Based on:*

(1) *Measurements collected at a specific field site, sampling and an analysis of physical, chemical and biological processes affecting the fate and transportation of pollutants or contaminants; and*

(2) *Predictions of the fate and transportation of the pollutants or contaminants that consider the maximum rate of the migration of contaminants and the impact of the pollutants or contaminants on public health and safety and the environment.*

Sec. 115. NAC 444.684 is hereby amended to read as follows:

The plan for operating a Class I site must:

1. Include a description of the equipment and persons necessary to operate the site;

2. Provide for:

(a) Adequate fire control methods to extinguish and prevent the spread of accidental fires;

(b) The prevention of scattering of papers and other lightweight debris by portable litter fences or other suitable devices; and

(c) The disposal of any special wastes **[peculiar to the area served; and**

3. Comply] *specifically permitted by the solid waste management authority;*

3. Show how the site will comply with the requirements set forth in **[40 C.F.R. Parts 258.20 to 258.29, inclusive.] NAC 444.686 to 444.702, inclusive, and sections 62 to 68, inclusive, of this regulation; and**

4. Include a plan of action to be taken in the event of an emergency which might occur at the site. The plan must include, without limitation, an organized, coordinated and technically and financially feasible course of action to be taken:

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(a) If a fire occurs at the site, including identifying the nearest fire department and how and under what circumstances the fire department will be notified.

(b) To protect the safety of personnel and users of the site, including training for employees on first aid and the availability of emergency services. The site must have a telephone, radio or other similar communication device to enable the personnel to contact the appropriate providers of emergency services.

(c) To shut down the site because of inclement weather or act of God.

(d) If equipment breaks down, including the provision for and a description of backup equipment.

(e) If hazardous or toxic materials are released from the site.

(f) If the presence of leachate is detected in a structure for the collection of leachate which was previously dry, or if a spill or leak occurs at a tank or surface impoundment for the storage of leachate.

Sec. 116. NAC 444.685 is hereby amended to read as follows:

1. Except as otherwise provided in **[subsection 2, financial assurance for]** *this section, the owner or operator of a Class I site or lateral expansion of a Class I site [must] shall comply with the provisions of [40 C.F.R. Parts 258.70 to 258.74, inclusive.] sections 73 to 84, inclusive, of this regulation.*

2. *Owners or operators of Class I sites who are entities of the State of the Nevada or the federal government are exempt from the provisions of this section.*

3. The solid waste management authority may approve an alternate plan for financial assurance *[.] if the alternate plan meets the criteria set forth in section 84 of this regulation.*

Sec. 117. NAC 444.686 is hereby amended to read as follows:

1. The operation and maintenance of a Class I site must be in a manner which will not create odors, unsightliness or other nuisances.

2. The face of the working fill must be kept as narrow as is consistent with safe and efficient operation of equipment.

3. Bulky waste material which may provide **[rodent]** *for the* **harborage of rodents** must not be used for *the* final surface of side slopes.

4. The solid wastes must be spread and compacted in thin layers. In the construction of each cell it must be spread into layers that do not exceed 2 feet before compaction. ***Equipment for compaction must be appropriately sized and must make a minimum of two passes over each layer of waste.***

5. Solid waste must not be placed within 200 feet of the boundary line of a Class I site unless a ***shorter distance*** is approved by the solid waste management authority.

[6. The operator of a Class I site shall comply with the requirements relating to the maintenance and operation of the site set forth in 40 C.F.R. Parts 258.20 to 258.29, inclusive, effective October 9, 1993.] *In approving a setback of less than 200 feet, the solid waste management authority shall consider the uses of the surrounding land, the surrounding topography and the operations conducted at the site.*

Sec. 118. NAC 444.688 is hereby amended to read as follows:

The compacted solid waste of a Class I site must be covered as follows:

1. **[All] Except as otherwise provided by this section, all** solid waste must be covered at the end of each operating day **or at more frequent intervals as necessary to control disease vectors, fires, odors, blowing litter and scavenging** with at least 6 inches of compacted **[soil]**.

2. **On all but the final lift of a landfill, a layer of suitable cover material, compacted to a minimum uniform depth of] earthen material.**

2. *The solid waste management authority may approve alternative materials to be used for compaction and alternative thicknesses of that material if the owner or operator shows that the alternative materials and thicknesses are capable of controlling disease vectors, fires, odors, blowing litter and scavenging without presenting a threat to public health and safety and the environment.*

3. *The solid waste management authority may grant a temporary waiver from the requirements of subsections 1 and 2 if the owner or operator can show that extreme seasonal climatic conditions make the requirements impractical.*

4. *Unless otherwise approved by the solid waste management authority, at least 12 inches of compacted earthen material must be placed [daily on all surfaces of the fill except those where operation will continue the following day.*

3.] *as an intermediate cover on a fill surface if that surface is not to receive waste for more than 90 days. This subsection does not apply to final fill surfaces.*

5. The integrity of **[the]** daily and intermediate cover must be maintained until further filling or the addition of final cover is made. All cracks, depressions and erosion of the cover for surface and side slopes of fills must be promptly repaired.

[4. A layer of suitable cover material, compacted to a minimum uniform depth of 24 inches must be placed on any surface that represents the final grade of the landfill. This cover must be placed within 30 days after the completion of a lift.

5. The final]

6. **Daily and temporary** cover must be graded to drain runoff of surface water. The top slope must have a grade of not less than **[2 percent and not more than 4] 3** percent.

Sec. 119. NAC 444.692 is hereby amended to read as follows:

[Sewage solids or liquids and other special wastes must not be]

1. *An owner or operator of a Class I site shall restrict the types and amounts of liquids and solid sewage disposed of in a Class I site except [when special permission has been given] as permitted by the solid waste management authority [.] in accordance with subsections 2 and 3.*

2. *Liquids which are in bulk or not in containers may not be placed in a municipal solid waste landfill unit unless:*

(a) *The waste is household waste other than septic waste; or*

(b) *The waste is leachate or gas condensate from the municipal solid waste landfill unit and the new or existing unit or lateral expansion is designed with a composite liner and system for the collection of leachate as described in section 42 of this regulation.*

3. *Containers holding liquid waste may not be placed in a municipal solid waste landfill unit unless:*

(a) *The container is a small container similar in size to a container which would normally be found in household waste;*

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(b) The container is designed to hold liquids for use other than storage; and

(c) The liquid waste is household waste.

4. As used in this section, "liquid waste" means any waste material which is determined to contain free liquids as a result of a paint filter liquids test, Method 9095, described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", Environmental Protection Agency, Publication No. SW-846.

Sec. 120. NAC 444.698 is hereby amended to read as follows:

1. Access to a **[land disposal site] municipal solid waste landfill unit** must be controlled as to time of use and as to those authorized to use the site **[.] in order to prevent unauthorized vehicular traffic and illegal dumping. Access must be controlled by using artificial or natural barriers, or both, as appropriate, to protect public health and safety and the environment.** An attendant must be on duty to control access during hours of operation.

2. Permanent roads **[should] may** be provided from the public road system to the site. Temporary roads may be provided as necessary to the working face. All roads must be passable during **[normal]** inclement weather.

Sec. 121. NAC 444.704 is hereby amended to read as follows:

1. All Class II sites must **[conform to] comply with** the minimum **[standards for location, design, construction, operation and maintenance] requirements** set forth in *this section* and NAC 444.706 to 444.728, inclusive. *A Class II site which fails to satisfy the minimum requirements shall be deemed to be an open dump for the purpose of the disposal of solid waste and is prohibited.*

2. *The owner or operator of a new or existing municipal solid waste landfill unit or a lateral expansion which meets the criteria for a Class II site pursuant to NAC 444.571 shall place in the operating records of the unit such information as necessary to demonstrate how the unit or lateral expansion meets the criteria.*

3. *An owner or operator of a new or existing municipal solid waste landfill unit or a lateral expansion which meets the criteria for a Class II site who has knowledge that the unit or lateral expansion has contaminated the ground water shall:*

(a) Notify the solid waste management authority of the contamination; and

(b) Comply with the requirements for a Class I site set forth in NAC 444.677 to 444.702, inclusive, and sections 30 to 84, inclusive, of this regulation.

4. *The owner and operator of a Class II site shall comply with:*

(a) Sections 32, 69, 70 and 71 of this regulation for the closure of the municipal solid waste landfill units at the site;

(b) Sections 34 and 72 of this regulation for the postclosure maintenance of municipal solid waste landfill units at the site;

(c) NAC 444.685 and sections 73 to 84, inclusive, of this regulation; and

(d) NAC 444.692 and 444.698 and sections 62 to 68, inclusive, of this regulation if the Class II site contains at least one municipal solid waste landfill unit.

Sec. 122. NAC 444.705 is hereby amended to read as follows:

[The owner or operator of a new Class II site or a lateral expansion of a Class II site must, before beginning construction or operation of the site, obtain the approval of the solid waste management authority. The permit application for approval] An application for a permit to operate a Class II site or a lateral expansion of a Class II site must be submitted to the solid waste management authority and must include:

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1. The name, location and mailing address of the:
 - (a) Site;
 - (b) Owner of the site;
 - (c) Operator of the site; and
 - (d) Authorized agent of the owner.
2. Proof of ownership of the land on which the site will be located.
3. The report *for the design of the site* required by NAC 444.708.
4. The plan for operating the site required by NAC 444.712.
5. ***The plan for closing the site, the plan for postclosure and the documentation of the financial assurance required by NAC 444.704.***

Sec. 123. NAC 444.706 is hereby amended to read as follows:

The location of a Class II site must:

1. **[Be easily accessible in all kinds of weather to all vehicles expected to use it.**
2. **Safeguard against water pollution originating from the decomposed solid waste.**
3. **Safeguard against uncontrolled movement or collection of gas originating from the decomposed solid waste.**
4. **Have an adequate quantity of earth cover material that is workable, compactible and which does not contain organic material of a quantity and distribution conducive to the harboring and breeding of disease vectors.**
5. **Conform with land use planning of the area.**
- 6.] ***Comply with the provisions of NAC 444.678 and sections 35 to 41, inclusive, of this regulation.***
2. Not be within one-half mile of the nearest inhabited dwelling or place of public gathering or within 1,000 feet of a public highway, unless special provisions for [site **beautification, litter control and vector control**] ***the beautification of the site and the control of litter and vectors*** are included in the design and approved by the solid waste management authority.
- [7.] 3. Meet with the approval of the solid waste management authority.
- [8. **Comply with the requirements set forth in 40 C.F.R. Parts 258.10 to 258.16, inclusive.**]

Sec. 124. NAC 444.708 is hereby amended to read as follows:

The report for the design of a Class II site must [:

1. **Be signed by a professional engineer registered in this state.**
2. **Include preparation of a general location map showing land use and zoning within 1 mile of the disposal site.**
3. **Include preparation of a topographic map of the area which should:**
 - (a) **Be at a scale of not more than 200 feet to the inch, including contour intervals of not more than 5 feet.**
 - (b) **Show the proposed fill areas.**
 - (c) **Show any proposed borrow areas.**
 - (d) **Show access roads.**
 - (e) **Show a typical cross section of a lift.**
 - (f) **Show grades for proper drainage of each lift.**
 - (g) **Show special drainage and gas control devices, if required.**
 - (h) **Show fencing and all other pertinent data to indicate clearly that the landfill will be developed, operated and completed in an orderly manner.**

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4. Define the population and area to be served by the site.
5. Define the anticipated types, quantities and sources of solid wastes to be disposed of at the site.
6. Define the source, type and quantity of cover material.
7. Include proof of compliance with the requirements relating to the control of surface water set forth in 40 C.F.R. Parts 258.25 and 258.27.
8. Include] *include* a design that [is sufficient to ensure that]:
 1. *Is intended to protect* the waters of the state [will not be degraded] *from degradation* by pollutants or contaminants [.]; *and*
 2. *Complies with the requirements set forth in NAC 444.680.*

Sec. 125. NAC 444.712 is hereby amended to read as follows:
 444.712 The plan for operating a Class II site must:

1. [Include a description of the equipment and persons necessary to operate the site;
2. Provide for:
 - (a) Adequate fire control methods to extinguish and prevent the spread of accidental fires;
 - (b) The prevention of scattering of papers and other lightweight debris by portable litter fences or other suitable devices; and
 - (c) The disposal of any special wastes peculiar to the area served; and
3. Comply with the requirements set forth in 40 C.F.R. Parts 258.20 to 258.29, inclusive.] *Comply with the subsections 1, 2 and 4 of NAC 444.684; and*
 2. *Demonstrate how the site will comply with NAC 444.714 to 444.728, inclusive, and sections 62 to 68, inclusive, of this regulation.*

Sec. 126. NAC 444.714 is hereby amended to read as follows:
 [1.] The operation and maintenance of a Class II site must be [in a manner which will not create odors, unsightliness or other nuisances.

2. The face of the working fill must be kept as narrow as is consistent with safe and efficient operation of equipment.
3. Bulky waste material which may provide rodent harborage must not be used for final surface of side slopes.
4. The solid wastes must be spread and compacted in thin layers. In the construction of each cell the wastes must be spread into layers that do not exceed 2 feet before compaction.
5. The operator of a Class II site shall comply with the requirements for the maintenance and operation of the site set forth in 40 C.F.R. Parts 258.20 to 258.29, inclusive, effective October 9, 1993.] *in accordance with NAC 444.686.*

Sec. 127. NAC 444.716 is hereby amended to read as follows:
 Solid wastes *at a Class II site* must be covered [as follows:

1. Until October 9, 1993, all solid wastes of a Class II site must be covered with a suitable material compacted to a minimum uniform thickness of 6 inches at least twice each week, with no more than 4 days between consecutive coverings. Exceptions to the requirement for semiweekly cover may be approved by the solid waste management authority for some items if special provisions are made for their handling. An example would be bulky, nonputrescible items which might be stored in a designated area

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and crushed and incorporated in the landfill on a monthly basis allowing use of a smaller piece of equipment for routine operation.

2. The final cover must be graded to drain runoff of surface water. The top slope must have a grade of not less than 2 percent and not more than 4 percent.

3. The integrity of all cover must be maintained. All cracks, depressions and erosion of the cover for surface and side slopes of fills must be promptly repaired.] *in accordance with NAC 444.688.*

Sec. 128. NAC 444.733 is hereby amended to read as follows:

[The owner or operator of a new Class III site or a lateral expansion of a Class III site must, before beginning construction or operation of the site, obtain the approval of the solid waste management authority. The application for approval] *An application for a permit to operate a Class III site or a lateral expansion of a Class III site* must be submitted to the solid waste management authority. Unless *otherwise* determined by the solid waste management authority, the application must include:

1. The name, location and mailing address of the:
 - (a) Site;
 - (b) Owner of the site;
 - (c) Operator of the site; and
 - (d) Authorized agent of the owner.
2. Proof of ownership of the land on which the site will be located.
3. The plan to characterize solid waste required by NAC 444.737.
4. The report required by NAC 444.739.
5. The [environmental monitoring] plan *for monitoring water* required by NAC 444.741.
6. The plan for operating the site required by NAC 444.684.
7. *The plan for closing the site which complies with section 32 of this regulation.*
8. *The plan for postclosure of the site which complies with section 34 of this regulation.*
9. *Documentation of financial assurance which complies with NAC 444.685.*

Sec. 129. NAC 444.739 is hereby amended to read as follows:

A report for the design of a Class III site must:

1. Be signed by a professional engineer registered in this state.
2. Include a general location map showing land use and zoning within 1 mile of the disposal site.
3. Include a topographic map of the area which must:
 - (a) Be at a scale of not more than 200 feet to the inch, including contour intervals of not more than 5 feet.
 - (b) Indicate the proposed fill areas.
 - (c) Indicate any proposed borrow areas.
 - (d) Indicate access roads.
 - (e) Indicate a typical cross section of a lift.
 - (f) Indicate grades for proper drainage of each lift.
 - (g) Indicate the placement of special devices for drainage and controlling gas, if required.
 - (h) Indicate fencing, equipment for shelter, facilities for employees and all other relevant data to indicate clearly that the landfill will be developed, operated and completed in an orderly manner.
4. Define anticipated types, quantities and sources of solid wastes to be disposed of at the site.
5. **[Comply with the requirements of the design set forth 40 C.F.R. Part 258.40(b) or demonstrate that**

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another] ***Demonstrate the*** design is sufficient to protect the waters of the state from degradation by pollutants or contaminants. The demonstration must consider, without limitation:

- (a) The hydrogeologic characteristics of the site and surrounding area;
- (b) The climatic factors of the area; and
- (c) The volume and physical and chemical characteristics of predicted leachate generation.

6. Provide proof of compliance with the provisions relating to the runoff and control of surface water set forth in **[40 C.F.R. Parts 258.25 and 258.27.] sections 65 and 66 of this regulation.**

7. Define the source, type and quantity of cover material for the site.

Sec. 130. NAC 444.741 is hereby amended to read as follows:

1. **[An environmental monitoring]** A plan ***for monitoring water*** for a Class III site must provide for a system capable of monitoring the performance of the design of the site, including the monitoring of the unsaturated zone or ground water depending on local conditions.

2. The plan must:

(a) Identify the location and construction of monitoring points to be used to detect the migration of pollutants or contaminants from the site to the waters of the state;

(b) Specify monitoring parameters and the frequency of monitoring those parameters;

(c) Specify procedures to ensure quality for all field and laboratory work;

(d) Provide for the semiannual submittal of monitoring data to the **[division;]** ***solid waste management authority;***

and

(e) Define procedures which will be followed if monitoring provides evidence of potential design failure; and

(f) Comply with the provisions of **[40 C.F.R. Parts 258.51 to 258.58,] sections 43 to 61, inclusive, of this regulation,** if the plan includes the monitoring of ground water.

3. The **[division]** ***solid waste management authority*** may suspend monitoring requirements if the owner or operator of a Class III site demonstrates that there is no reasonable potential for migration of pollutants or contaminants from the site to waters of the state.

Sec. 131. NAC 444.743 is hereby amended to read as follows:

[1. A Class III site which stops receiving waste before October 9, 1993, must comply with the requirements relating to the final cover of the site set forth in 40 C.F.R. Part 258.60(a).

2. A Class III site which stops receiving waste on or after October 9, 1993, must comply with the requirements relating to the closure of the site set forth in 40 C.F.R. Parts 258.60 and 258.61.

3. A plan for the closure of a Class III site which complies with 40 C.F.R. Part 258.60(c) must be approved by the solid waste management authority before the plan may be carried out.

4. The final cover of a Class III site must be graded to drain runoff of surface water. The top slope must have a grade of not less than 2 percent and not more than 4 percent.] A Class III site must comply with requirements set forth in sections 69 to 72, inclusive, of this regulation, concerning closure and postclosure.

Sec. 132. NAC 444.748 is hereby amended to read as follows:

1. Any person who believes that **[unreasonable and extraordinary hardships will result from strict compliance with] an alternative to any standard specified** in NAC 444.570 to 444.748, inclusive, **and sections 2 to 87, inclusive, of this regulation, will comply with the intent of the specified standard and will protect public health and the**

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environment, may petition the state environmental commission for a variance in accordance with its procedural rules. *A variance may not be granted if it is inconsistent with the federal criteria for landfills set forth in 40 C.F.R. Part 258, as that part existed on the effective date of this regulation.*

2. Any person who wishes to appeal from a decision or action of the solid waste management authority may do so. Such an appeal must be made in writing in accordance with the *state environmental* commission's procedural rules.

Sec. 133. NAC 444.969 is hereby amended to read as follows:

"Solid waste management authority" **[has the meaning ascribed to it in NAC 444.624.] means the officers and agents of the division of environmental protection, any district board of health created pursuant to NRS 439.370 or any other entity given specific authority by the division to control asbestos.**

Sec. 134. NAC 444.586, 444.606, 444.689 and 444.717 are hereby repealed.

Sec. 135. 1. This section and sections 1 to 61, inclusive, 69, 70, 71, 73, 74, 75, 85 to 115, inclusive, and 117 [118] to 135, inclusive, of this regulation become effective upon filing with the secretary of state.

2. Sections 62 to 68, inclusive, and 72 become effective on October 9, 1993.

3. Sections 76 to 84, inclusive, and 116 become effective on April 9, 1994.

END OF PETITION 93008 (LCB R-051-93)

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